

Lectures  
on the  
Natural History



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*Class* *10a*  
*No 3685-74*

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*Vol. 3*



# Lecture 20<sup>th</sup>

## Antispasmodica

Spasm implies simple Contraction, we therefore add Involuntary Violent & Inordinate to distinguish it from Natural Contraction. Spasm & Convulsion signify nearly the same thing but if we distinguish them Spasm denotes a simple Contraction without alternate Relaxation. ~~Spasm~~ Convulsion means repeated Contractions & Relaxations. They are both of the same Kind they affect the same parts are owing to the same Causes & often change from one to the other. We do not however consider Spasm in this limited sense but rank under it spasmodic Motions of every Kind. And by Antispasmodics we mean those Medicines which take off these Motions whether they are more strictly speaking Spasms or Convulsions.

Fetid Gums. These have been always known to be powerful Antispasmodics. But



2<sup>nd</sup> previous to speaking of their Virtues we shall treat of the Disorders in which they have been used. Of these the chief is

### Hysterias.

This deserves a particular Attention on account of its Frequency, its obscure Nature & Origin its Violence & the Difficulty of distinguishing as well as of curing it. No disorder puts on such various Appearances. It attacks the Mind as well as the Body. There is scarce a Disorder but what it imitates & resembles & there is no part or Function but what it affects. It is a disorder that has been known at all Times & in all places. We have descriptions of it in the early writers tho' much inferior to the account they have left us of other disorders. This was probably owing to Women being chiefly intrusted with the Cure of this Disorder which was supposed to originate in the Uterus & Physicians were never called in but in obstinate & desperate Cases. 'Tis but lately indeed that Physi-



cians have formed a proper idea of this disease. It may be said to consist in Affections of the Nervous System & in spasmodic convulsive motions of the Alimentary Canal & more or less general motions of the whole System. 'Tis more common to Women than Men & there are very few Women who at some period or other of their lives do not experience its Effects. It is not however confined to the fair Sex for Men are sometimes usually affected with the Hysterics which are different from the Hypochondriasis in Nature & Cure as shall be shown presently. Tho' every Woman is subject to the Hysterica yet all are not equally liable to be affected with it. It chiefly affects those of a peculiar Habit, Temperament & Idiosyncrasy who live on certain Aliment at a particular period of Life. In some the Disorder is brought on by lighter Causes than in others & these again are more severely affected. Some are affected from the most trivial & slightest Causes & in some it is produced only from considerable causes. Those Persons who are na-



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Generally inclined to the Hysteria & are frequently  
& violently affected & are generally possessed of gr.  
Sensibility & Mobility of Body & Mind; they have  
an exquisite Sense of Pleasure & Pain, are ex-  
tremely lively Imagination & joyous Disposition;  
They are pusillanimous light & fickle, prone  
to various Passions & Affections of the mind  
Those also who have peculiar Idiosyncrasies  
when they are affected in a particular manner  
from certain Odors Aliments & Pastes which  
are agreeable to most Persons. Attacks  
those of a lax soft tender weak Habit of  
Body; of an elegant, delicate & graceful  
form & those who have large arterious  
Systems & are subject to copious Menstrua-  
tion; those also who are subject to Hamor-  
rhages who lead an idle indolent life  
live high & use but little Exercise; those  
who are afflicted with Grief, Fear & Soli-  
citude; those also who are recovering  
from tedious Disorders or who have  
had profuse Hemorrhages or other



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Evacuations which debilitate the Body. This Disorder is not confined to the most delicate it is very frequent & violent among the Vulgar & attacks Women of a strong muscular Habit of body. Unmarried Women Widows & Barren Wives & those who are subject to Hemorrhages from the Uterus & Labor under the Chlorosis are most subject to it. It however also attacks pregnant Women & Women of all ages, Ranks & Situations in Life. It is sometimes an hereditary Disease with some Women & even whole Families when it is owing to some fault derived from the Parent. Women of a robust & manly Habit & a Sanguineous Temperament who are prone to Affections of the Mind are seized with a convulsive Hysterical Suffocation & are violently affected over the whole System. Those of a phlegmatic Habit who are affected with a Chlorosis & are weak & delicate are seized with Faintings



and more local & topical Affections. This Disorder most frequently occurs from the Age of Puberty to the total Cessation of the Menstrual Evacuation. It is not however confined to this Period. I have known <sup>it</sup> to attack Girls of 8 or 10 Years of Age before there was the least Appearance of the Menses. It also attacks Woman after the Menses have ceased even when they are 60 or 70 Years old. It frequently attacks Women when the Menses are about to cease altogether, likewise pregnant & lying in Women particularly after difficult Labors.

The occasional Causes in Persons who are pre-disposed are as numerous as they are <sup>various</sup> ~~numerous~~. Sudden & Violent Emotions of Mind & Mental Affections in general - Of these <sup>ne</sup> ~~not~~ are more apt to produce this Disorder, than violent Anger, great Terror or sudden Consternation; Objects horrible to the Eyes; the Sight of a Person in an Hysteric Fit; an unexpected Messenger of sorrowful Tidings the improper Relation of unforeseen Accidents, the Recollection of former violent Emotions ~~may~~ even frightful Dreams have sometimes brought on this Disease. Certain Odors particularly Per,



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fumes, as Musk, Roses &c have produced it in  
some Women, in others it has been occasioned by  
particular Sounds. Hoffman & Whitt give us Instan-  
ces of strong Light having thrown Persons into an  
Hysteric Fit Retention or Suppression of natural  
or customary Evacuations, particularly the sudden  
Cessation of the Lochia or Menses from Cold or Mois-  
ture, obstructed Perspiration, Costiveness & other  
Causes of this kind have been very properly ranked  
amongst the occasional Causes. Profuse Hemorrhages  
of the Menses or Lochia & immoderate Diarrhoea,  
as will sometimes give Occasion for the Production  
of the Hysteria - further taking Cold when the  
Body is warm or fatigued with Exercise; Plethora  
Debility, Inanition, Fatigue, Watching, Acute  
Diseases, Pregnancy; Errors in the Quantity or  
Quality of Drink or Aliment. Fasting warm drink  
flatulent Food or Food with Regard to which the  
Person has an Idiosyncrasy, as Fish & Milk, strong  
Cathartics, the Retropulsion of Arthritic or Rheu-  
matic Complaints; repelled Miliary Eruptions;  
Fluor Albus with acrid ulcerating Matter in the  
Part; Schirrus & Cancer of the Uterus, Prolapsus  
Uteri, violent Pain with many other Things of an irri-



8. tating Nature & finally whatever occasions Commo-  
tions in the Nervous System may be ranked amongst  
the Occasional Causes of the Hysteria. Scarce any  
exciting Cause is required if the Disease has be-  
turned frequently & become Periodical.

We are next to give the History & Course of the  
Disease, not however in a regular Manner for this would  
be next to an Impossibility. The Symptoms imitate every  
Disorder & seldom preserve a certain Rule or Type;  
they are scarcely ever the same in two different Persons  
& they are different in the same Person at different Times.  
If the Attack is not sudden, sometimes before the Fit is  
completely formed the Patient yawns & stretches & feels  
a heaviness, Lassitude & Languor in the Limbs and  
Members of the Body, with a lowness of Spirits -  
Flushings & Heat frequently felt in the Forehead,  
Cheek & Temples & Chilliness shifting from one Place  
to another. The Countenance is either Pale or flushed  
Pains are felt in different parts as the Cheek, Loins  
& Extremities, but these generally occupy the Back  
& some part of the Head. The Urine is limpid like  
Water & is made in large Quantities. A Motion is  
perceived at first obscurely as if a Ball was moving



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backwards & forwards in the Abdomen; This appears  
as if it tended to the Diaphragm. The Ball appears to  
grow softer & larger till it arrives <sup>at</sup> the Pit of the  
Stomach when it again contracts into a hard Lump.  
As the Ball goes up it occasions various Symptoms,  
some Parts of the Abdomen appear hard & tense and  
prominent & others as if retracted. Thus in a rumbling  
Noise in the Intestines the Spincter Ani is contracted  
that it will not admit Air to pass nor a Glyster Pipe  
to be introduced. There is an Anxiety & Oppression at  
the Præcordia with a Sense of Tightness & Constriction.  
The Epigastrium appears as if distended. The Respiration  
is difficult & small, the Pulse is hard small and  
Intermitting trembling & unequal & a dry convulsive  
Cough. These are attended with a singing Noise in the  
Ears sparkling before the Eyes & Giddiness of the  
Head, a Heaviness of the Senses, the Patient is at  
length seized with slight Fainting or is overwhelmed  
with Sleep. The Ball which is called Globus  
Hystericus afterwards rises into the Throat attended  
with the Tumor of the Fauces, the Respiration be-  
comes thick & short with a Sense of Anxiety and  
& Constriction so great as if the Fauces were drawn to-  
gether & tied with a Cord or Bandage which threatens



immediate Suffocation. The Voice is lost the Counte-  
 nance appears livid & swelled; the Pulse appears  
 almost abolished low, small & slow; the Breathing  
 is so imperceptible that it appears there would be  
 instant Suffocation; the Eyes grow dim; the Patient  
 at length sinks away into a Sleep during which  
 he is either agitated with Convulsive Motions or lies  
 immovable. When the Paroxysm remits, the Sleep  
 becomes more placid & she recovers with repeated  
 slow Sighs; a rumbling Noise in the Belly & a Dis-  
 charge of Flatulences & sometimes a venous Dischar-  
 ge from the Vagina; the Eyes open, the Heat <sup>& Color</sup> of the  
 Countenance become animated & the Senses & the  
 Judgment return with the Voice. After the Parox-  
 ysm they complain of Heaviness & Pain in the Head  
 they remain infirm & Torpid. The Paroxysms are  
 sometimes attended with Convulsions; the Body  
 is forced into various positions, they exert unusual  
 Strength & perform Feats which appear almost  
 miraculous; they bend & extend the whole Body  
 they jump, tremble & are twisted round with the  
 utmost Velocity; they are distorted into a thou-  
 sand different Shapes; they generally retain some



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Senses, they hear see & know & on the Remission of the Paroxysm they recollect every Thing that had passed. They are sometimes seized with Convulsions which resemble the Epilepsy when they fall down suddenly with a Loss of Reason ~~and~~ <sup>and</sup> Sense. These Convulsions are often preceded by a disagreeable sensation of cold Air rising from the Limbs Feet & Arms & advancing towards the Head & when it arrives here they fall down senseless. These Convulsions are sometimes Constant but they generally intermit at Times. After being affected in this Manner sometimes the Motions cease altogether & the Patient falls into a Sleep resembling Apoplectic; when they recover they are ignorant of what passed since the Attack. Some are affected with a Paraplegia or Hemiplegia or a Paralysis of a particular Part. They are sometimes seized with a Catalepsis; sometimes the Mind is more affected than the Body, the Tongue appears as if chattering, but they observe no Order. They faultter & speak Nonsense, they beat their Breasts as if painful; they are agitated with dreadful Visions, they are borne away by different & opposite Passions of the Mind which succeed each other without any Reason, Rage, Fear, Hope, Love, Hatred & Despair rapidly follow each other - with a little Reason they change from Crying to immoderate



Laughter & are dissolved in foolish Mirth. There are likewise several Affections of the Brain, there is Dizziness of the Head various Images present themselves before the Eyes, as Flies. The Patient lies sometimes Comatose, there is a sudden Abolition of Strength, fluttering of the Heart a Coldness of the Extremities & Syncope; the Mind & Senses cease acting; the Pulse & Respiration are diversified a thousand different Ways, They lie immovable & to all Appearance dead & continue in this State for one or more Days until they have been laid out for Interrment, & there are one or two Instances upon Record by grave Authors of Persons in this State being actually buried & who came to Life again in the Vault in which they were deposited where they perished most miserably. Rigors & Tremblings attack the Patient with a Coldness of the Extremities; a violent biting Cold & severe pains are felt in the Back, Loins & Os Sacrygis. There also wandering Pains with a Sense of Constriction as if the part were tied or Compressed with a Cord or Bandage. There is not seldom a Severe, tense dull or acute Pain



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of the Head which are sometimes fixed, sometimes continues wandering, vague or Periodical; sometimes on one sometimes on the other side of the Head, at Times it is seated externally in the Fore Head with a Sense as if a Nail was driven therein hence it is called the Clavus Hystericus; these are almost always attended with a Giddiness & sense of Fullness in the Head, a Singing in the Ears with an intolerable Sense of <sup>alone</sup> Heat & Cold & a violent Pulsation of the Arteries. There is sometimes a Nausea & Vomiting of porraceous Bile; at times with excruciating Pains of the Teeth & Jaw with a Discharge of Saliva and a stinking Breath. There are sometimes Acid, bilious & sulphurous Eructations so extremely acid as to set the Teeth on Edge. Heartburn, Hiccough Borborrismi with various kinds of Pains; Pains in the Abdomen, Pit of the Stomach & the Regio Coli. Some are attacked with an incessant & excessive Vomiting & sometimes a Diarrhea. Some are troubled with Colic & the Iliac Passion with Tenesmus and Cholera ending in Jaundice. Some have a Constant & violent Desire to make Water, in some the Urine is suppressed & only evacuated in Drops with a great Sense of Heat & Pain resembling the Nephritis. The



14<sup>o</sup> Color & Sediment of the Urine vary. In some Cases the Disorder returns periodically with a dry Convulsive Cough a Tightness of the Præcordia or a Palpitation of the Heart, or Giddiness or slight fainty Fits.

This Disease is often complicated with other Diseases. When a Patient subject to this Disease is attacked with other Disorders, whatever may be their Form some Symptoms of the Hysteria will accompany them. It is evident therefore in different Cases different & even opposite Methods of Treatment will be required. The Paroxysms are of various Appearances & always of different duration; some last only a few Minutes some for Hours & even days & in general the more violent the Attack the sooner it ceases. Those which affect only a particular part continue some Time. In some the Disorder is not very apt to return, this depends on the general Habit of the Body & the Occasional Causes; in others it returns upon the slightest Occasions & this is most generally the Case. The Disorder returns at uncertain Periods. The Accessions are different from each other; in some they succeed each other quickly & the Patient



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will have several Paroxysms in a Day. They commonly attack at Menstrual Period on returning frequently they become in a Manner perpetual, they often become periodical when the same Train of Symptoms succeed each other in every Paroxysm. During the Intervals the Patient is sometimes perfectly well & quite free from all Complaints & every Pain. Others & particularly those advanced in Life who are weak & in whom the Disorder has continued a long Time during the Intervals complain of the Head Ach, Night Mare, Watching Dreams. This Disorder of itself is seldom Mortal but then it lays the Foundation of other Diseases which prove more Fatal in their ~~Termination~~. Most Authors are of Opinion that the Hysteria & Hypochondriasis are the same Disease & should only have different Names as they occur in different Sexes; but tho' they agree in many particulars & have many Symptoms in Common, they have still more which are particular to & are characteristic of each Disorder. By comparing the Description of the Disorder just given with the Hypochondriasis, it will appear that they are really distinct Persons subject to these Disorders differ alto,



together in Habit & Temperament. The Hypochondriasis generally attacks the Male Sex, tho' this is not always the Case as we have many Instances of the Hysteria in Men and many Cases called Hypochondriac were really Hysteria & vice versa. The Hypochondriasis generally attacks Persons of a Melancholy Temperament, of a dry rigid & lean Aspect & a dark Countenance who have rough black curled Hair, the Veins are large & turgid they are generally subject to Costiveness & the Piles; they possess a calm tranquil and constant Mind; are sedate & reserved. It generally attacks Persons in the decline of Life it advances by slow Steps is constant & perpetual & continues for Months & Years by Day & by Night without Interval & is seldom radically cured. It is evident from what has been said how different the Hypochondriasis is from the Hysteria. The Hysteria is chiefly confined to Women it occurs in the prime of Life in Persons of a Sanguineous Temperament who are possessed of great Sensibility & Irritability



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of Nerves & Mobility of the System. The Parox-  
ysm is violent & sudden but ~~it~~<sup>it</sup> soon over perhaps  
never to return. During the Interval the Patient  
enjoys an uninterrupted State of Health. Some  
Symptoms are greatly similar in both as in the  
Alimentary Canal, the distension of the Abdomen  
the acid Eructations the Cruities &c are the  
same in both but these Symptoms likewise  
occur in other Disorders as in the Chlorosis;  
in suppression of the Menses & in the Gout. In  
the Hysteria the Symptoms are more violent and  
more purely spasmodic & convulsive; they are  
likewise more extended over the System. In  
the Hypochondriasis the symptoms are less  
violent & are confined in a great Measure to  
the Alimentary Canal. The moveable Ball & the  
Constriction of the Fauces never occur in the  
Hypochondriasis nor in the Abdomen contrac-  
ted by Spasm nor the Navel Retracted as in  
the Hysteria. The Habit & Frame of Mind is also  
different. The Hypochondria is in every Place  
& always melancholy sad, anxious, fearful  
suspicious, diffident, apprehensive are always



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foreboding some ill Fortune to themselves - they  
give up all hopes of Recovery - they suspect  
their most assured friends they loath the world  
Every thing therein - they are fond of Solitude  
& fly Society. Their Mind is intent on one Ob-  
ject both Day & Night from which they are di-  
verted by Dreams, vain fears & terrors.  
When the Minds can be drawn from this  
Subject they reason with Judgement upon  
others & even seem to possess Superior Judge-  
ment, Prudence & Sense. The Hypochondri-  
asis is distinguished from Melancholy only  
by being accompanied with affections of the Mi-  
nistrary Canal. It is not rare to find the  
Hypochondriasis change into a real Me-  
lancholy & even Mania. If there is Melan-  
choly in Hysteria it seldom continues long  
& is soon succeeded by Joy, Mirth & Laughter  
the Mind is seldom intent on one Subject  
the Transitions from one Subject to another  
are sudden & the Successions & Alterna-  
tions from one thing to another are sudden  
when the Paroxysm is over the Patient



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possesses a sound Mind & a Healthy Constitution  
Both the disorders may be complicated with  
each other in the same person. The Hysteria may  
be changed into the Hypochondriasis partly  
from advanced Age & partly from Obstruc-  
tions being formed in the Viscera. The Hyste-  
ria is often produced from Suppression of the  
Menses & the Repulsion of various Eruptions.  
It is very probable that pains in the head,  
Affections of the Alimentary Canal, Cardial-  
gia, Flatulencies & Acidity which occur in  
the Chlorosis, Arthritis &c when they take  
place in a female have been too often mista-  
ken for the Hysteria & it is this probably which  
has led Physicians to consider the Hysteria  
as very frequent & inconstant.  
We are next to treat of the best Method of relieving  
the Disorder but previous to this we must pre-  
mise with Respect to the Prognosis that tho'  
the disease may appear very alarming the fear  
is generally greater than the Danger. A Paroxysm  
of the Hysteria seldom proves fatal sometimes  
however it ends fatally. It disposes some in



The form of an Apoplexy in others it produces  
 great & long faintings & some are carried  
 off by severe Convulsions. The danger is to  
 be estimated by the manner of coming on,  
 the Strength of the patient the Severity, Num-  
 ber & Duration of the Paroxysms likewise  
 from the Manner in which the vital func-  
 tions are affected for the Danger is propor-  
 tioned to the Degree in which these suffer.  
 But tho' there is little Danger during the  
 Paroxysm the Disorder is extremely apt  
 to return upon the slightest Occasions &  
 to become tedious & periodical. It is some-  
 times changed into an Epilepsy when it  
 is exceedingly difficult to cure & very ob-  
 stinate & often continues to afflict the  
 Patient till the Day of her Death notwith-  
 standing all the Efforts of a Physician.  
 By the repeated Attacks the Strength of  
 the patient is impaired & the Natural  
 Functions are affected - the Vital  
 Functions are also variously affected  
 which proves a fresh Source of innae-



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mirable Evils. The different Changes of the Body by  
advancing in Life will sometimes diminish the  
Violence of the Disorder & undiv it less fre-  
quent. Sometimes by removing the Predisposi-  
tion ~~to the disorder~~ ~~which~~ ~~will~~ ~~re-~~ ~~move~~ ~~it~~ ~~intirely~~. When the Predisposition to  
the disorder is very great when it arises from  
some fixed but latent Cause, when it returns  
frequently when the Paroxysms are long  
when the disorder has become periodical or  
has degenerated into an Epilepsy when it is  
attended with a Suppression of the Menses,  
the Hypochondriac Disease or other Com-  
plaints, for the more of these cooperate the  
greater will be the difficulty of Cure. On the  
other hand, if the patient is young, the disor-  
der recent, if it has arisen from Affections  
of the Mind or Suppression of the Menses.  
the fewer alarming symptoms occur the  
easier & quicker will we relieve our Patient.  
The Indications of Cure turn on 3 Points.  
1<sup>st</sup> To remove & guard against the occasional  
causes.



- 2<sup>d</sup> To mitigate, shorten or relieve the Paroxysm  
 & to guard against the consequences &
- 3<sup>d</sup> To prevent the Return of the paroxysm by  
 avoiding the Occasional Causes, correcting  
 the Predisposition of the system to the Di-  
 sease by restoring Tone to it.

First with Respect to the Occasional Causes  
 These are sometimes external & transitory  
 they are very various but are particularly  
 such things as excite the passions of the  
 Mind or they may be constant & inher-  
 ent in the body such as Suppression of  
 the Menses Fluor Albus &c. For this  
 Reason it is evident that it sometimes  
 requires even different & opposite Treat-  
 ment from what it does at other times

With Respect to the second Indication  
 when the Symptoms of the paroxysm are  
 slight there is little Occasion for Medi-  
 cine. We may as well abstain from  
 the use of it. But if the Accession is  
 severe we should afford the most



speedy Relief in our Power. If there are Symptoms  
 of Plethora or the Disease has been brought on by  
 Cold or a Suppression of the Menses, particularly when  
 this has taken place, Bleeding will afford Instantane-  
 ous Relief - whenever there are Symptoms of the Blood  
 being obstructed & stagnating in the Head or Lungs -  
 when the Respiration is difficult & short, the Coun-  
 tenance livid when there are Symptoms of Coma  
 or Lethargy we should never hesitate to take away  
 some Blood, tho' the Pulse is small & vibrating  
 for the Pulse in these Cases will often become stron-  
 ger & quicker upon bleeding. We should never order  
 bleeding but with Caution & Circumspection & it is  
 a general Observation that unseasonable Bleeding  
 has been attended with the worst<sup>st</sup> Consequences and  
 has even destroyed the Patient. It is to be considered  
 as a Palliative, affording Temporary Relief. If  
 only a small Quantity is <sup>to be</sup> taken away or a particular  
 Symptom requires the Loss of some Blood this is better  
 accomplished by Leeches or Cupping Glasses with  
 Scarification. If the Disease is accompanied with  
 Spasmodic or Convulsive Motions, Perturb<sup>st</sup>ation  
 of the Mind & Delirium, Sedative Antispasmodics  
 of the milder kind are to be employed. If there is



a Syncope, Catalepsy Coma or Abolition of the Senses we should cautiously & with Prudence administer what are commonly called Nervous Medicines or the stronger Antispasmodics, by the Stimulus of which Sense & Motion are excited. The weaker Medicines should be first tried, when these fail we should have Recourse to the more Powerful. The heating, violent & stimulating substances should always be avoided. These always increase the Anxiety of the Precordia, render the Respiration difficult & increase & excite Convulsions. These Remedies should be given as much as possible in the Beginning of the Paroxysm - when these given they will often prevent many of the Symptoms which would otherwise occur. The Patient should first be recovered by external Applications. Various Methods are employed for this Purpose - Volatile Salts, & Volatile Spirits Vinegar Fetid, the Smoake of Candlewick, burnt Tea, Hens, Leather & Bones, the Smoke of Tobacco and Asafoetida are to be applied to the Nostrils. The Breast Abdomen & other Parts are to be rubbed with Woolen Cloths impregnated with Camphor and fetid Epithems, other aromatic Plaisters and



anodyne Glysters may be used with Advantage -  
 Pediluvia may likewise be employed - Cold  
 Water may be thrown into the Face & Breast  
 with Success - This is every day used when Syncope  
 comes on. If the Syncope does not yield to these  
 Applications & the Patient has no Appearance  
 of Sense & Motion, strong Sternutatories, Vesi-  
 catories, Glysters & Emetics even of the acrid  
 Kind may be used. It is sometimes difficult  
 to tell whether the Person is dead or not - in this  
 case some advise us to make loud Cries, to  
 prick the Body in various parts to apply strong  
 Sternutatories & even the actual Caustery to  
 the Soles of the Feet - but there is no Doubt <sup>but</sup> these  
 are disagreeable & dangerous Expedients. We  
 should be cautious how we employ strong Ster-  
 nutatories when the Countenance is livid  
 & bloated, lest we should occasion the Rupture  
 of some Blood Vessel of the Lungs or Brain -  
 We should have Recourse to gentler Methods  
 as the gentlest & less stimulating Cantharides,  
 the warm Bath & moderate Friction, If any  
 internal Medicine are requisite they should be



26 given in Solution & large Doses. Opium Camphor  
Alther, the Vol. Alkali & the various Combinations &  
Compositions that may be formed from these are most  
proper for this Disease. The Dose & Choise are to  
be regulated by the Habit of the Patient.

After the Paroxism is removed, the Patient is  
to be kept in Bed & refreshed by cordial & exhilara-  
ting Medicines & Drink by which I mean in general  
Vol. Medicines. We should be carefull to prevent  
a Return. This is to be effected by avoiding every  
Thing that may dispose to this Disease or may  
serve as an Occasional Cause to excite it & fresh.  
But it is principally to be done by correcting  
the Predisposition in the System & the too great  
Sensibility & Irritability in the Primæ Viæ and  
of the Nervous System in general. We should  
Strengthen the Body & guard against those Things  
that may effect a Return of the Disease. A Radic-  
cal Cure is to be obtained only by a proper Regimen  
& Mode of Life. The Regimen is to be regulated by  
the Habit of the Body, the Idiosyncrasy of the  
Patient & the Cause of the Disorder. The Regimen



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should be more or less strict as Circumstances may require; the Food should be nourishing easy of Digestion & should be taken in small Quantities at a Time & repeated at Intervals. Hunger and Fulness should be equally avoided; we should refrain from every Thing irritating; we should on the one hand avoid, hard, Salt, Smoked & fat Meat & rancescent Food of all kinds & on the other Hand watery insipid acrescent & flatulent Fish & Water Fowl are apt to disagree, particularly about the Menstrual Period, these therefore should be avoided. A Milk diet is the best Food when it does not disagree with the Stomach. Toast & Water with a little Spirit is the most proper Drink. Old Wine as being weaker & less acrescent is excellent. Pure cold Water is often the best & least exceptionable Drink it sharpens the Appetite & promotes Digestion. A pure open dry heavy & dense Air is proper in this Disorder. A warm confined Air debilitates the System, hence the Patient ought not to be confined in a small narrow Chamber & if her Circumstances will admit should live in the Country & enter into the Business of a Country Life. The Body should be clothed with Garments



suitable to the Season & Climate. When the Season  
 requires a Change of Dress this should not be sudden  
 but the Alteration should be made by Degrees. We  
 should guard against Heat & Cold & sudden Transi-  
 tions from one to the other. We should on the one  
 Hand equally avoid the hot Rays of the Sun in  
 the Meridian & on the other the moist exhalations  
 of the Morning & Evening Air. The Patient should  
 never go in the cold when she is warm. Moderate  
 Exercise can not be too much recommended this  
 promotes Digestion increases the Action of the  
 Vessels, quickens the Circulation of the Fluids &  
 keeps up the Secretions & Excretions; it streng-  
 thens the System gives Vigour to the Body, dimin-  
 ishes the Sensibility & Irritability of the System  
 & raises the Spirits. Moderate Walking or riding  
 in a Carriage is highly useful, but riding on Horse  
 back is superior to either - this in the Beginning  
 should be moderate & at length increased as the  
 Strength will admit. It is most proper in the cooler  
 Hours in the Forenoon before Dinner - it should  
 never be used on a full Stomach or in the Cold



moist Evening Air nor should it be continued till the Body is fatigued. The Exercise should be varied long Journeys therefore through different Countries are more useful than the same Degree of Exercise in one Place for by continually shifting the Scene the Mind is entertained with new Objects, which at the same Time that they entertain & please will have considerable Influence in removing the Disease. Long Sea Voyages on Account of the whole some Sea Breezes & the continual uninterrupted Motion of the Ship are particularly useful. The Sleep should be moderate & if necessary should be obtained by proper Medicines - too much Sleep is hurtful The Patient should not go to bed immediately after Dinner nor too hastily after Supper, they should not lie too long in the Morning tho' in the warmer Climates an Indulgence in this Respect is necessary. Whatever has a Tendency to keep the Mind chearful, to delight the Eye & please the Senses should be carefully sought after. Passions of the Mind or offensive Objects are to be avoided & whatever increases the Disease & favors the Disposition to Obstruction. The natural & habitual Secretions or Excretions are to be particularly attended



to - we should keep the Bowells & Menses regular. It is sometimes necessary to evacuate the Stomach & Bowels by a gentle Emetic or Cathartic before any other Remedies <sup>are</sup> employed - The Bowels should be kept regular chiefly by a proper Regimen. The stronger Cathartics are doubtful. When <sup>re</sup> Mobility is connected with a Sanguineous Habit the Diet should be thinner & lower than in other Cases - where Fulness appears to favor the Disease especially about the Period of the Menses - if these do not flow in sufficient Quantity or are altogether suppressed, bleeding will generally give Relief - we should however take away Blood sparingly & cautiously, as repeated bleeding debilitates the Body & favors the generation of Plethora which fixes the Disorder more inveterately in the System & exposes the Patient to frequent & severe Returns of the Disorder.

There are three Classes of Medicines which act by diminishing the Sensibility & Mobility of the System in the Cure of Hysteria. The first & second comprehend Narcotics & Antispasmodics The third are Astringents or what are commonly



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called Tonics or Roborants. The former act quickly  
& their Operation is transitory, They leave the Body  
weak & the Mind languid & depressed & are to be  
considered only as Palliatives. The Radical Cure  
will depend in a great Measure upon the Use of  
Tonics. Sedative & Antispasmodics are necessary  
when the Paroxysms return frequently to diminish  
the Violence of the Disease & they will sometimes  
remove the Disease Radically, where it depends on too  
great Mobility & this does not depend on Debility. When  
the Disorder has become Periodical these Medicines  
should be given before the Paroxysm. Instances of  
the Disorder being cured in this Manner you will find  
in D<sup>r</sup> Whitt. Amongst these Remedies Opium deser-  
ves the first place. Many Opinions have prevailed  
concerning it - by some it has been thought a preca-  
rious Remedy in those disposed to Costiveness - after  
its Operation is over it is said to leave the Body lan-  
guid & the Spirits depressed & as it impairs the Or-  
gans of Chylification, debilitates the Faculties of  
the Mind, say they, it impairs the Strength & aggra-  
vates the Disease & we should therefore abstain  
from its Use. These Arguments appear to carry with  
them more weight than they deserve. Their Evils -



might probably take place if we were not at the same time to employ such a Regimen & Medicines as would counteract its bad Effects. It is often of singular Service; tis more sudden & constant in its Effects than any other Medicine & indeed I know not what Physicians would do without it.

Antispasmodics may be generally employed for the Cure of Hysteria these are Vol. Salt Ether, Musk, Camphire & Fatid Gums - they are chiefly to be used either immediately before or during the Paroxysm when they moderate & mitigate the fit. The Pediluvia are of great Service. When the Paroxysm is severe ~~the~~ the Disorder returns in the form of an Epilepsy at stated periods with a Sensation of Coldness proceeding towards the Head, if we throw a Ligature tight round the body where the coldness has not reached, it will often prevent the Paroxysm from coming on or at least mitigate its Violence.

Our chief Dependance for a radical Cure must be on a proper Course of Astringents



Tonic Remedies together with a judicious Regulation of Diet using such as will correct the predisposition or counteract the Insensibility & Irritability of any particular part as the Alimentary Canal or the Mobility of the System which is owing to or accompanied with Debility & Relaxation - this is evident from the disease being most common in those Persons who have Diseases of the Viscera & in young persons, in the female Sex who have been broken down by Diseases as the Consumption. In the old Men & in the colder Regions morbid Mobility is less common. Where Mobility & Debility are combined Tonics are chiefly proper & even in irritable Habits where there are no evident Signs of Debility. They act principally on the Stomach or the part to which they are immediately applied - They restore & confirm the Tone of the whole System diminish Mobility - excite the Appetite & promote digestion - cause all the functions to be properly performed & under the Mo-



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tions of the Solida Viva firm & stable. They should be given only during the Interval of the Paroxysm, their use should be persevered in for a considerable Time. They should be administered with Caution in persons of a sanguineous Temperament & of a plethoric Habit, & where there are Signs of a Visceral Obstructions. The Peruvian Bark & the various preparations of Steel are the best Medicines if there is not a peculiarity of Constitution which forbids their use. These should be combined <sup>or</sup> given alternately that is at different times in the same day - they answer better given in small repeated Doses. A purge is generally directed to be given at Intervals; but this practice is erroneous for by one purge we may destroy the good Effects of a Week's Chalybeate. Waters are of great Service when the Stomach is in Substance, for the Bark cannot be employed. Bitters Aromatics acrid & austere Wines are also very proper. Red Port & Claret are the proper Vehicles



35.

for administering Medicines. Cold bathing is  
the finest & most effectual Remedy which con-  
tinued for a sufficient Length of time. It should  
be used chiefly in the Morning provided  
the Shock can be borne. The Choice, quantity  
form & Composition of the different Med-  
icines should be regulated by the Strength  
& habit of the ~~body~~ patient. We should always  
administer a new Medicine with Caution  
& Circumspection & we should make repea-  
ted Trials before we persist in the use of  
any medicine. One Medicine will frequently  
succeed in one patient & fail in another. Be-  
sides these some Medicines have been reckoned  
Specifics in the Cure of this disease. Some  
have been supposed peculiarly adapted to  
particular Cases. Some advise rough & vio-  
lent Methods as acid Emetics & Cathartics  
in Women of a strong & masculine Habit  
of body, but their Effects are always doubt-  
ful. In Women of a weakly Constitution  
& thin spare habit, Issues & Tons will pre-  
serve them from more violent Affections



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Some violent Affection of the Mind, as great Terror  
may also prevent the Paroxysms from coming  
on & cure the disease altogether. Of this I  
had an Opportunity of observing an instance  
in a young Girl violently affected with the  
Hysteria at Edinburgh for which a Variety  
of Medecines had been tried without affor-  
ding Relief. Dr Cullen in her hearing or-  
dered Piners & Tonges to be heated red hot  
& directed the Attendants to bear her flesh  
with them in order to recover her from  
the next Paroxysm. This made such an  
Impression of Terror upon her mind  
that she never had another fit. A Case is  
related which came under the Notice of  
the great Boerhaave in the poor house  
for Orphan Girls at Haarlem. Ten girls  
were seized with the Hysteria in Conse-  
quence of seeing one in an Hysteric parox-  
ysm. Nothing could be done untill Dr  
Boerhaave ordered them to be burnt  
to the Bone with a red hot Iron, which  
effectually cured them & none were ever



38  
afterwards seized with the Disease. It is astonishing how the Mind is affected by feeling Passions & Affections even in indifferent Persons. Armies have been inspired with Courage or Panick struck with the Bravery or Cowardice of a single Man. Also what happens every Day in Conventicles where from enthusiastic preachers a great part of the Audience are affected in the same Manner with the preacher & assume his various Agitations & Contortions. I mention these Instances to shew what great Influence the Mind has upon the Body. It always requires a great Accuracy of Judgement to determine the Time & Cases where & when the passions may be employed with Safety & Advantage. Notwithstanding all our Endeavors all our Remedies have sometimes little or no Effect in preventing the predisposition, & tho' they mitigate they frequently disappoint us in our Expectations of a perfect Cure. They sometimes aggravate the Disease



we should therefore abstain from their use  
I trust particularly to a proper regimen,  
Exercise & the Cold Bath. A Change of  
Air, Climate, Place of Abode & Manner  
of Living have sometimes performed a  
cure. Age by changing the Tempera-  
ment has been of Service to many.  
Matrimony & Child Bearing have re-  
lived Numbers.



# Lecture 29<sup>th</sup>

39.

We now come to speak of particular Antispasmodics & first of  
*Fraxetida*. This Gum has long been used  
 in various Diseases. It has been looked upon  
 as a good Antispasmodic & Stimulant. It  
 yields its Virtues sufficiently to Water. I  
 think I have seen Effects from it in Solution  
 which it would produce in Substance. I ge-  
 nerally give it in Solution ℥ss of the Gum  
 to ℥ss or ℥viij of common or Mint Water  
 a table spoonful of which may be given at a  
 Time & repeated as Circumstances may re-  
 quire. In flatulent & spasmodic Colics it  
 may be given by way of Glysters. ℥ij may be  
 dissolved in Water with 50 or 60 Drops  
 of Laudanum. Combined with Opium  
 it may have good Effects in Low Nervous  
 Fevers. For its History see Kimpffer's  
 History of Japan. Vide also St. Cullen's  
 Nat. Med. for a fuller account of its  
 Virtues. —



Gum Ammoniac is a weaker Antispasmodic than Asafetida but has generally been thought to be a <sup>more</sup> Powerful Expecterant. A Watery Solution of this or what is commonly called the Amm: is often prescribed to promote Expectoration when a gentle Stimulus is necessary this will answer very well, but the most powerful is the Volatile Alkali. The Sal. Volat. of Hartshorn & Ammoniac are of the same Nature. The former is the least pure on Account of the Empyreumatic Oil that adheres to & rises with it in Distillation. The Vol. Alkali is an Antispasmodic & Stimulant & from Pringels Experiments a most powerful Antiseptic, hence it is particularly calculated for the last Stage of Nervous Fevers where it answers every Indication that occurs & I have frequently experienced the most favorable Effects from it. I generally give it in Boluses  $\text{℥}^{\text{ss}}$ , or  $\text{vj}$  in each one of which is to be taken every two Hours, If there is a Diarrhœa I combine  $\frac{1}{3}$  or  $\frac{1}{4}$  of a  $\text{℥}^{\text{ss}}$  of Opium with each Bolus. If there is a Costiveness or the Skin is dry  $\text{℥}^{\text{ss}}$  of Tart. Emetic may



be added to each Dose. This Medicine is now frequent<sup>ly</sup> employed for the most violent Spasmodic Disorders. That it possesses a Stimulant Quality is evident from its inflaming the Skin when applied to it in concentrated State, but it appears as if its Action was very much confined to the Part to which it was applied. Tho' I have given it internally in a variety of Cases I never observed it to quicken the Pulse but on the contrary often renders it slower & fuller. There are some Facts which make it probable that it acts as a Stimulus to the Nervous System without Stimulating the Blood Vessels. In one or two Instances I have observed a burning Sensation in the Stomach from its Use, which obliged me to desist from giving it. When this Symptom is troublesome it may be removed by a little Acid of any Kind which will destroy the Alkali. Its Antiseptic Virtues have been established by Dr. Pringles Experiments. He found it to be a most Powerful Antiseptic. Before his Time the Opinion was universal, that as it was the Produce of Putrefaction it was the Cause of Putrescency; that it was a Septic & produced a



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Dissolved State of the Fluids. This Opinion still prevails in some Measure, as it is difficult to get the better of long established prejudices, but Opinion should never be put in Opposition to Experience. I have never hesitated to administer it in the last Stage of a Nervous Fever where a Septic Tendency takes place & with the most marked Success. Its Use is by no Means confined to the Nervous Fever; it may also be employed in the last Stage of Inflammatory Fevers & even in the Pleurisy & Peripneumony where the Powers of Life begin to fail & the Expectoration is checked from Debility where I have used it freely with as much if not more Success. It is excellent in Spasmodic Disorders in the Stomach & intestines with or without Flatulency. If the Pain is violent we may combine Opium with it & I do not know a certain & quick Remedy nor am I acquainted with any Combination that will produce similar Effects. When the Complaints arise from Acidity & Indigestion occasioning Irritation, as a Stimulant & Antispasmodic, & combined with Opium a Sedative it answers



13.

every Indication. In the wandering Gout the Vol. Alkali may be given internally. Sinapisms applied externally to the Legs; Cordials, Spirituous Drinks may be used as generous Madeira or even good Brandy. On these we place our greatest dependence & if they fail there are but slender Hopes of Recovery.

Castor has been employed for the same Purpose & in the same Intention as Asafatida and has often been combined with it. The Combination, as neither Medicine is improved & the Bulk is increased which renders the Dose more nauseous, I think may as well be let alone. I have not often employed Castor as I have never seen any Virtues from it which might not be obtained from Asafatida. The Cases in which I have ordered it has been where the Patient was very much averse from Asafatida & then I have given it from 15 to 20 or 30 Grains for a Dose, tho' even in this Dose it is less certain than the Asafatida.

Musk. I am under the same difficulty with Respect to this as Castor. From the high Price of this Medicine & its being but seldom to be procured genuine I have used more seldom than otherwise.



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would have done. I have used <sup>it</sup> with Success in one Case of Convulsive Hicough in Dose of ℥. ʒ. 15. It has been considered by most Physicians as an Anti-spasmodic but I believe few speak from the Experience which they themselves have had. Musk & Cinnabar constitute the Chinese Remedy for the Hydrophobia which was formerly depended on as a Specific for the Cure of this Affection. From my own Experience it appears to possess some Virtues. In the Case of convulsive Hicough it afforded speedy & effectual Relief.

Oleum Animale is used by the German Physicians as a Powerful Antispasmodic and recommended for the Cure of Epilepsy. It is not in Use here & therefore not to be had in our Shops however desirous we might be of giving it a Trial.

Aether. The Antispasmodic Effects of this are now pretty generally known. As it is very volatile its Effects are sudden & transitory. It has been used in Spasmodic Affections, 50 or 60 Drops or even more may be taken in Water, when its Effects will be instantaneous if it produces any



at all. In the Arthritis when it fixes on the <sup>45</sup>Stomach one or two Tea Spoons full may be given & if its Use is to be attended with Success this will happen in a few Minutes. It has also been used in external Applications. In the Nervous Headach it has been attended with Success when applied to the Forehead. This was kept as a Secret by the late Dr. Ward. It may be applied in Cotton & covered with a Bladder. —

Oleum Succini, Haerlem & British Oils, have been used in Spasmodic Affection externally and internally & frequently afford great Relief. The British & Haerlem are the Empyreumatic Oils of some substances. It is perhaps not material from what substances we extract them; they appear to be of the same Nature. They are Stimulants & Antispasmodics they should therefore never be used where there is Fever particularly if there is any Inflammation. In Toothach Earach or other topical Pains it is often used. I mention these Oils that you may be able to determine in what Cases they are proper & in which they are forbidden.

Camphor This is a Medicine which for the good or Harm it may do deserves a particular Attention. Most Physicians are but little acquainted



with its real Virtues & while some recommend it as a powerful Remedy; others reject it as a doubtful fallacious & insignificant Substance. It would be tedious to relate the various Opinions which have been entertained respecting it and therefore shall after a few Observations refer you to Dr. Cullen.

It is a Substance sui generis to which there is nothing Analogous in Nature & which can not be imitated by Art. It has been disputed whether it acts by increasing the Motions of the System; whether it increases or diminishes the Heat of the Body; whether it dissolves or thickens the Blood & lastly in what Diseases it may be used with Success. To ascertain these, various Experiments have been instituted.

Dr. Monro made some Experiments on Frogs with Camphor. He found that when externally or internally applied it brought on Torpor & Insensibility; that it lessened the Number of Contractions of the Heart by rendering each Pulsation stronger & fuller.

Menghini made a great many Experiments



with it on Quadrupeds, Birds & Fishes which are  
related in the Transactions of the Bologna Society.  
He observed that it threw some into a deep others into  
a placid Sleep; in some it produced Tremors and  
Madness; some it vomited others it purged & in many  
it proved diuretic; in some it brought on Hicough  
in some an Anxiety & in many it produced Epileptic  
Fits & to most it proved an acrid Poison if given in  
sufficient Quantity. These however are not so much  
to our Purpose as those made on the Human Body  
Hoffman in his Dissertation on Camphor tells us  
that he frequently gave  $\mathfrak{z}$  or  $\mathfrak{z}$ ss of Camphor dissol-  
ved in Spir<sup>t</sup> of Wine to Persons in Health without  
any Appearance of those Effects which proceed  
from Stimulants; the Warmth & Heat of the Body  
were not increased nor was the Pulse quicken'd nor  
the Color of the Urine heightened nor any Thirst  
produced. He gives us a Case where  $\mathfrak{z}$ ss of it dissolved  
in Olive Oil were swallowed through Mistake.  
It was scarcely swallowed before a Vertigo which  
the Patient had before was considerably increased,  
the Extremities grow cold & the Countenance pale;  
the Pulsations of the Arteries were very small & languid  
there was an Oppression & Anxiety at the Praecordia



and a cold Sweat broke out on the Head, the Patient had a disturbed Imagination & a Disposition to Sleep.

Pointeau a late French writer of Character relates a similar Case. A Woman was seized with a Colic for which she took ℥<sup>ss</sup> 60 of Camphor in half an Hour not long after the Pain ceased entirely; the Patient was striped & put into Bed where she was seized with a Coldness & paleness of the Body without Tremor which seemed to threaten immediate Expiration. The By standers endeavoured to warm her by giving a few Spoonful of French Wine & by the Application of warm cloths, but the coldness continued near an Hour & went off without a Sweat. It effectually relieved the Colic for which it was given.

A Gentleman took ~~grain~~ of Camphor made into a Bolus with Cons: Ros: at 8 o'clock in the Morning; he perceived no Alterations till two Hours after when he felt a Nausea & Vertigo — he was in such a State of Delirium that on Account of the Confusion of his Ideas he could <sup>pay</sup> attention to Nothing. At twelve o'clock he had an Inclination.



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& violent straining to Vomit, tho' nothing but a little Bile was brought up - he drank warm Water to encourage the Vomiting but without Relief. He had a great Deprivation of Strength in his lower Extremities & staggered in attempting to walk. During the vomiting the Pulse was small & languid but afterwards became quicker. He then <sup>eat</sup> 2 or 3 sweet Oranges & went to Bed where he fell into a profound Sleep which continued 3 or 4 Hours & when he awoke he found himself perfectly well & his Pulse under the Natural Standard & more full than Common. He felt some Lassitude which he ascribed to Vomiting. The same Gentleman some days after took  $\text{gr} \frac{x}{4}$  of Camphor every half Hour until he had taken 40  $\text{gr}^{\circ}$ . He found that it did not act as a Stomachic but rather as a Sedative & Antispasmodic.

The next Case is that of a Gentleman which we shall relate in his own words. I took  $\text{ʒij}$  of Camphire made into a Bolus. Previous to this I had applied to the pit of my Stomach Fahrenheit's Thermometer in which the Mercury stood at  $72^{\circ}$  when it arose to  $90^{\circ}$  that is  $18^{\circ}$  in 5 Minutes. My Pulse beat 77 Strokes in a Minute. Ten



50. Minutes after I again applied the Thermometer when it arose only 10<sup>th</sup> in 5 Minutes my pulse continuing the same as before. Three Quarters of an hour after I again applied the Thermometer when I found the heat the same; my Pulse now beat 10 Strokes less in a Minute. A Quarter of an hour afterwards I had a dizziness of my head so that I could hardly walk across the Room. I then opened the Window & thrust out my head but the Objects in the Street appeared in a very confused manner I was with Difficulty I could keep myself from falling. I then laid myself on the Bed & endeavored to amuse myself with a Book, but here every thing appeared in a very confused manner more regular as in the Street. I however made shift to run over 2 or 3 Pages but could not ~~perceiv~~ commit even the shortest Sentence to Memory. I then threw down my book left the bed & tried to



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walk I found that my Judgement was totally  
disturbed & that every thing was become worse  
I then again laid down upon the bed I had  
recourse to my book but what became of me  
afterwards I know not. My Brother who was  
with me said that I lay composed for some  
Time that I then sat up & made an Effort to  
vomit but brought up nothing; that I looked  
frightfully, frothed at the Mouth; that I en-  
deavored to tear every thing near me. At  
length threw myself upon the Bed with  
strong Convulsions & miserable Cries. After  
these severe & almost fatal Afflictions I began  
to recover & the first persons I recollected to  
have seen were my Brother & Dr Cullen who  
had been sent for & whose Presence gave me  
great pleasure. Every thing now appeared  
new & wonderful to me & it seemed as if  
I had just entered into Life. I could not  
recollect what had passed nor did I know  
that I had taken the Camphor nor did any  
other person know it - it was therefore thought



that I had been in a fit of the Apoplexy & Bleeding was prescribed to which I absolutely refused to submit. My Pulse now beat 100 Strokes per minute. I got out of bed & demanded some Vol. Salt which was brought but afforded me no Relief. I then threw myself on the floor & found Relief from the coldness of it. I directed cold Water to be poured upon my Hands & Face. Dr Monro soon happened to call in at this Time I found a Paper on the floor on which was written the Word "Camphor." My Pulse was still at 100 I was full & equal.

Dr Monro ordered me to drink large draughts of warm water to excite a Vomiting & tho it was upwards of 4 hours since I had taken the Camphor, I vomited up a considerable part of it which all this Time had remained in the Stomach undissolved. I now first recollected that I had taken the Camphor but could not tell for what purpose. I then eat three Oranges but received



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no Benefit from them - Still had a Headach  
but my Judgement was not so much impaired  
I then took some Tea & an hour or two after  
wards some Juice of Lemmons. My Pulse  
was now reduced to 80 & when the Thermom-  
eter was applied to the pit of my Stomach  
it arose 2° or 3° above the Natural Standard.  
The Headach continued all the evening &  
my thoughts were still incoherent - About  
8 or 9 O'clock I took some broth & went  
to bed. The next morning I was free from  
Pain but felt a Sickness & Stiffness & I  
had a Costive Stool. It was 4 days before  
my head was perfectly restored. Here we  
find that the pulse was rendered quicker  
& the heat of the body increased but  
not in the Beginning. These Effects seem  
rather to be owing to the Nausea & other  
Symptoms which were produced from  
taking the Camphor in too large a dose.  
The Pulse was not quickened nor the  
Heat increased untill the Camphor had  
remained a considerable time in y<sup>e</sup> Stomach.



Camphor appears to be rather of a Sedative Nature & that it does not increase the Natural heat. It lessens the heat of the body in fevers removes Spasms & Convulsions & diminishes the frequency of the pulse & Circulation. Whether it does these in every Disease & in every Stage can be determined only by Experience. From the above related Diseases it appears that Camphor does not hinder the Respiration nor occasion a fulness of the Vessels of the Head & face; nor does it produce an Accumulation in the larger Vessels; neither does it leave the body more irritable, all which Effects attend the Exhibition of Opium. It therefore can be ranked neither among the Stimulants nor Sedatives as its Mode of Operation is different from either; but it must be placed in a distinct Class. viz. Antispasmodics & this with a few other Substances render it necessary to form a distinct Class.



55.

It is not attended with the heating Effects of Stimulants nor the Disadvantages of Sedatives. It is proved by D.<sup>r</sup> Pringle & Others to be highly Antiseptic one Grain being equal to 60 Grains of common Salt in preserving Animal Substances from Putrefaction & making allowance for the Parts which exhale it resists Putrefaction as 300 to 1 in proportion to common Salt. However these Experiments must be carried further before we consider them as conclusive & that Camphor is a good & safe Medicine in Putrid Fevers. For the remainder see D.<sup>r</sup> Cullen's Materia Medica.

We now come to treat of those Medicines who have the Fluids for their Object. It is unnecessary for me to enter upon the Consideration of the Fluids as D.<sup>r</sup> Cullen has treated the Subject fully & to him I therefore refer you. I imagine you are not now to learn that the Blood is composed of three parts. Other Matters may be occasionally present but can not be considered as constituent Parts.

From observing the appearances & Changes which the Blood spontaneously undergoes and the Effects which different Substances when mixed with it without ~~the~~ the Body produce, Physicians



very naturally concluded that they would produce  
 the same Effects when taken into the Body and  
 that the different States of the Fluids would pro-  
 duce Diseases. By Chemistry the Blood is decom-  
 posed & resolved into parts intirely new and  
 which did not formally exist before Decompo-  
 sition. Increasing or diminishing the different  
 Parts of the Fluids they imagined occasioned va-  
 rious Indispositions. This led Physicians to in-  
 stitute accurate Experiments on the Blood out  
 of the Body to ascertain the Effects & Changes  
 they produced on this Fluid. But these Expe-  
 riments <sup>which were</sup> made out of the Body do not prove that  
 the same Effects take place when these Substan-  
 ces are taken into the Body. All Vegetable Sub-  
 stances undergo a Fermentation in the Stomach  
 metallic Salts are frequently decomposed by  
 the Acid in that Organ, whence both are altered  
 or changed from their original Form. This has  
 led others into an opposite extreme paying  
 no Regard in Speculation at least to the  
 Fluids. They consider the Blood of no more  
 Consequence than so much Water thro' our  
 Vessels. But this will never apply in Practice



for there are certain Diseases in which the Blood  
is <sup>most</sup> undoubtedly vitiated & even primarily affected.  
An Instance of this I gave you in the Scurvy in  
which our principal Indication is to restore the  
Fluids to their natural State & Quality. This Dis-  
ease is gradual in its Approach & the Blood is  
most certainly contaminated & is only to be relie-  
ved by a Vegetable Diet or such a Course as will  
correct & restore the vitiated State of the  
Fluids. Medicines & Diet affect the Blood which  
is evident from Children being affected by the  
Nurses taking Mercury. D<sup>r</sup> Young tells us that the  
Milk of a Bitch was changed by living a few Days  
on Vegetables & became as Acescent as the Milk of Ani-  
mals that feed on Grass & Herbage. The Urine will  
be changed by taking particular Substances without  
the Animal Functions or the Action of the System  
being increased or diminished. If a Person were to live  
altogether on Animal Food he would in a short time  
be seized with Putrid Diseases not easily cured.  
These Facts are too evident to leave a Doubt, that  
our Fluids may be primarily affected, but I do not  
suppose that the Causes of Diseases are so frequently  
lodged in the Blood as has been imagined.



We shall treat of the Changes which the Fluids may undergo under each Class of Medicines. The first Class is the Attenuants of which in our next Lecture.

## Lecture 30th.

### Attenuantia

These are such Medicines as correct the Viscidity & Lensor of the Fluids. It is a very great Doubt with me whether this Indication ever occurs; for the present however we shall allow it as it will afford us an Opportunity to treat of the different Substances that have been ranked under this Head.

Water is undoubtedly an Attenuant but we shall not consider it in this limited View. We have already spoken of the external Application of both warm & cold Water; we are <sup>now</sup> not to speak of its internal Use, & first of

Cold Water. This taken into the Stomach acts as a Stimulus, removes Oppression there assists Digestion & promotes Expulsion of the Stools; by its Effects into the Stomach it causes a determination to the Surface of the Body & frequently produces a Sweat; hence it is useful



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in Vomiting which is owing to a Spasm & Constriction of the Cutaneous Pores. This occurs in the cold Fit of Intermitents & appears to be excited by Nature to restore the Determination to the Skin of the Humors which have been forced to the Internal Parts. To remove this we generally give the Saline Draught, but large Draughts of cold Water will answer equally well. The Antients prescribed & at this Day the Physicians of Spain & Italy prescribe cold Water in continued Fevers & even cool it with Ice. This is not safe in the Northern Climates where Fevers are generally attended with Inflammatory Symptoms in which Case this Practice proves hurtful. In low nervous & Malignant Fevers it is useful & is very agreeable & refreshing to the Patient & it acts as a Stimulant & Diaphoretic. Wherever there are topical Inflammations its Use is attended with Disadvantage & is even very dangerous.

Warm Water appears to have contrary Effects from cold Water. Taken <sup>to</sup> the Stomach it acts as a Diluent & Solvent & expedites the Evacuation of its Contents; it relaxes the Stomach & in Consequence of this the whole System; hence proves Diaphoretic



60 it also in the Intestines acts as a Diluent & Solvent. Cold & warm Water do not differ in their Effects when they have arrived thus far as they have each by this Time acquired the same Temperature with the Body. It dilutes the viscid Matter in the Intestines, prevents Obstructions of the Mesenteric Glands & other Chyliferous Vessels; by its Bulk it increases the peristaltic Motion & promotes the Excretions of Stool & Urine & hence it will have great Effects in Scrophulous Disorders.

Water alone may have this particular Effect, and it is from this that the Mineral & Medicated Waters are of such great Use in curing Scrophulous Disorders. It dilutes & attenuates the viscid stagnating Humors, increases the Action of the Vessels & thus answers every Indication. It is ~~who~~ever necessary to take it in large Quantities, hence the lower Class of People who swallow in Pints & even Quarts of Mineral Waters find Advantages which the rich & more delicate seldom experience. Hoffman & many other Physicians <sup>have</sup> highly extolled the Virtues of Water & have even considered it as an univer



sal Panacea & truly it deserves this Name more  
than any other Substance which have been from time  
to time dignified with this Title. I have frequently  
recommended a Tumbler of cold Water to be taken  
early in the Morning daily for Persons troubled  
with Indigestions Flatulencies & Hypochondriac  
Diseases; likewise to Persons subject to Craps &  
Spasms of the Stomach in a Word in Cases of  
Dyspepsia. At first it is disagreeable, but they  
soon become used to it & at last it is so very agree-  
able that they can not do without it. It exerts  
considerable Effects in the Blood Vessels for by  
increasing the quantity of Fluids it stimulates  
the Heart & arterial System accelerates the  
Circulation & increases the Secretions. It prevents  
Accumulation & Plethora & thus conduces to the  
Health of the Body. Pure Water when taken in  
large Quantities produces considerable Effects  
upon the System & will frequently cure the most  
obstinate Disorders. The Hotwells of Bristol  
are a Proof of this. The Bristol Water is the purest  
& simplest we know of & is recommended in a  
variety of Disorders. The Warm Springs near the  
Potomac in Virginia are of the same Nature.



62 From a Superficial Examination of a Bottle that was brought here I found it to be very Pure & to contain a considerable Quantity of Air. I therefore conclude it will prove a most excellent Solvent & extremely light & agreeable to the Stomach. On this Principle I have recommended them to several Gentlemen who were troubled with Indigestions arising from Obstinate affections of the Stomach who were greatly benefited by them & all agreed that the Water was pleasant & that it passed off remarkably quick by Perspiration & Urine. Upon first drinking them they generally proved Laxative; they drank from 4 to 6 Quarts a Day. It is much to be wished that some Persons Qualified for the Task would make an accurate Analysis of the Waters at the Spring to determine the Quality & Nature of them that they might be more generally recommended.

The different Kinds of Alkalis have been considered as Attenuants from their Effects externally & their known Qualities of dissolving & attenuating the Blood out of the Body & we find them prescribed as Attenuants even at this



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Time. There are several Circumstances which <sup>con</sup>cur  
to render Effects doubtful & even very improbable  
1.<sup>st</sup> The Alkali meets with an Acid in the Stomach  
by which it is decomposed & neutralized & changed  
from its original Properties - 2.<sup>nd</sup> It is necessary  
they should be employed in a Caustic concentrated  
State to act as a Solvent - this is absolutely impos-  
sible when they are taken by the Mouth, for the  
Quantity of Fluids they meet with in the Primæ  
Viæ will considerably dilute them & the Air which  
is always present there will render them mild.  
This renders it extremely doubtful whether they  
can act in the Manner supposed. The long  
Use of them may have considerable Effects on  
the Solids which finally may be extended to the  
Fluids.

Quick Lime has been considered as an  
Attenuant upon the same Principles as Alkalis  
but this seems highly improbable as we find it  
may be used with Advantage when Attenuants would  
be most improper e. g. in Calculous Complaints of  
the Kidneys & Bladder where it appears to act as  
the Uva Ursæ. In Chronic Dysenteries it is used  
with Advantage & when there is Gripping it is



64 necessary to add half Milk; it will be proper to give from Time to Time a Dose of Rhubarb and Calomel & as these Dysenteries frequently owe their Cause to an Ulcer in the Alimentary Canal this Method is altogether necessary. Marston recommends Lime Water in other internal Ulcers even those of the Lungs. Combined with Milk it is used in Scrophulous Ulcers & Swellings. All Physicians who have recommended it for this Purpose caution against using it freely when it occasions Costiveness & enervates the System. In these Cases it will be particularly necessary to combine it with an equal & even greater Quantity of Milk. We should begin with small Doses & give from 4 to 8 Ounces a Day at first & increase the Dose gradually until the Patient takes one or two pints a Day. It is recommended externally in Eruptions & Ulcers of the Skin Fistula &c by Hippocrates. It has cured the most obstinate of what are called Scorbutic Ulcers, by drinking & fomenting - Mixed with the Oil of Almonds or Olives it is an useful Application to Scalds & Burns. Castile Soap & Lixivium of



65  
of Lime are applied to Scrophulous Tumors to  
discuss or mature them. Lime water in which  
some Sublimate has been dissolved gives us  
the Aqua Phagedenica which is a good Gar-  
gle to wash Venereal Ulcers in the mouth  
& Glandes. With Copper or Roman Vitriol  
gives us the Aqua Sapharina which is an  
useful Operation in weak sore eyes parti-  
cularly in weak Old People. Combined  
with Sacch. Saturni it is of Service in Bry-  
cephalous & itchy Eruptions of the Skin.  
Dr Boerhaave denies that the Exhalations  
from Lime in new built Houses have the  
Effects ascribed to them. —

Soap. By this we mean a Combination  
of Alkalies with expressed Oils or Animal  
Fats. Many other Substances have been im-  
properly called saponaceous. Soap has been  
very often employed in Medicine but it is  
difficult to explain in every Case upon  
what Foundation. Soap dissolved in Wa-  
ter is esteemed more powerful than simple  
Water when Poison has been swallowed



66  
on account of its detergent & solvent Qualities.  
There is another reason for preferring it when  
Corros. Sublimi. has been swallowed, the  
Alkali will decompose the Sublimate &  
render it inert. 'Tis upon this principle that  
Sal. Tartar has of late been recommended  
where Sublimate has been inadvertently  
taken in too large Quantities the Alkali  
uniting with the Acid of the Sublimate  
renders this harmless. Soap dissolved in  
Milk is one of the most effectual Applica-  
tions for Swellings & Obstructions in the  
Breasts arising from stagnating & coagu-  
lating Milk. It is likewise useful as an  
Injection in fistulous Sores of the Breasts  
arising from the same Cause. Plaisters &  
the spirituous Solution of Soap are use-  
ful in Chronic Rheumatic Pains &  
other deep seated pains in the Joints.  
See Dr Cullen's Mat. Med. for y<sup>e</sup> remainder.

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## Inspissantia

67

These are opposed to Attenuantia. They are said to be such Medicines as restore the proper degree of Consistence to the fluids when these are too thin & dissolved. Whether any Medicine has these Effects is to me extremely doubtful. Even the most viscid & glutinous Substances undergo a Fermentation in the Stomach by which they are much changed. Under this Head Authors universally rank Demulcents. These are such Substances as defend the parts from the Irritation of thin & acid fluids. This Irritation occurs in Catarrh & Dysentery. Gum Arabic is one of the purest & most simple Mucilages. It is proper wherever the natural Mucus is abraded or a thin acid Defluxion in any part takes place. Hence it is used in the Cardialgia Hiccough Diarrhea & Dysentery Catarrh & in the Acid Urine. In this case it would be proper to combine with it the Oil of Almonds or Oils especially



68 Since Mr French an Apothecary in London  
has taught us that by the intervention of  
Gum Arabic Oil may be united with water  
by Trituration or simple Agitation.

Gum Tragacanth agrees with the former  
in every Respect & may be used in the same  
Intentions. It will be proper to allow Per-  
sons who are attacked with Hemorrhages  
to drink plentifully of some of these Sub-  
stances dissolved in Water as these are  
frequently owing to or at least attended  
with Irritation. Dr Hæuselquest gives  
us an Instance of an 100 persons shut up  
in a Fortress besieged by an Enemy  
who were totally unprovided with pro-  
visions supporting Life by suffering some  
Gum Acacia to melt in their mouth  
& then swallowing it. This took off the  
Irritation arising from Hunger &  
they lived for 2 Months upon Nothing  
Else.  $\frac{1}{2}$ ss of Gum Arabic dissolved in  
a Quart of Barley Water affords us an



69  
excellent Drink in Strangury arising from  
Blisters or taking Cantharides.

*Ichthyocolla* is more nutritious & mucaceous  
but is less proper in Dysenteries & other Dis-  
eases where there is a Tendency to Putrefac-  
tion. Marsh Mallows, Linseed, Bran &  
other sweet mucilaginous Substances a-  
gree so much with these in Virtue that  
they do not require a particular Descrip-  
tion.

*Antacida*. Physicians from observing an  
Acid constantly present in the Stomach, sup-  
posed that this Acid might be carried to &  
mixed with the blood & that many Disorders  
were owing to an acid Acrimony. There  
are no facts which make it even probable  
that an Acid prevails beyond the Stomach  
& Intestines. When the Acid is carried into  
the Intestines it meets with the Bile which  
counteracts the Acidity. When it is mixed  
with the Blood which is of a putrescent  
Nature any Acidity of the Chyle will



70 soon be overcome. This is confirmed by attending to what happens in persons who die of Hunger tho' they have subsisted on Vegetable food when they come to want Nourishment they are attacked by a fever of the putrid kind & die evidently of putridity. Acidity may occur in the Stomach to a morbid Degree from various Causes. The Medicines which correct this Acidity are called Absorbents as Magnesia Oyster Shells Potash Elix Coral &c. These differ but little. They form a Neutral Salt with the Acid which proves Expectorative. They do not prevent a future Generation of Acid. This must be done by Medicines which restore the Tone & Strength of the Stomach.

Expectoratives or Sternutatories. These are such Medicines as stimulate the membrane of the Nostrils & produce a Discharge of Mucus. Sternutatories were



71  
formerly in much greater use than at present  
when considerable Effects were attributed  
to them. They are not now so much confided  
in. They may prove useful in local partial external  
Affections of the Head. The Substances most generally  
employed are the Turpeth Mineral which is the  
most Powerful, Assacum or Aspara Bacca the next  
in Strength & Tobacco which is in very common Use  
They are Useful in Rheumatic Affections of the Teeth  
Ears Head & Face & in Inflammations of the Eyes -  
They prove useful by exciting a Stimulus in a Part  
different from the one Affected by which a greater  
Quantity of Fluids is determined to the Part to  
which it is applied & the Determination to the affected  
part is taken off. Snuffing Tobacco is only in the  
Beginning for by long Use the Sensibility of the Part  
to its Stimulus is diminished & its Effects are lessened  
& even destroyed. The Effects of Custom are displayed  
in the Use of Tobacco thro' all its Varieties. Writers upon  
Ethics have from this drawn a Conclusion that the Rich  
& the poor are not conscious of their Wants. The Applica-  
tion of this to Medicine if not more important is at  
least more perceptible & obvious. It shows that the most



72  
Acrid Substances when the System has been long used to them may loose their Effects on it & the most active Medicines may by long continued Use be rendered habitual. Poison in King Mithridates refused to do its usual Office, because he had been used to take it lest he should be destroyed by it. See Cullen's M. M.

Expectorantia. By this Term we mean such Medicines as are intended to promote the Discharge of Mucus from the Lungs, which are often denominated Pectorals. Innumerable & every different Substances are employed for this Purpose. They may all be referred to two Heads. The first promote this as they do any other Secretion by stimulating the Organs of Excretion & Secretion. The second, when the Secretion & Excretion are diminished or suppressed by Spasm are such Medicines as produce or increase it by taking off the Spasm. All Expectorants are therefore either Stimulant or Antispasmodic. Of the former the Effects are precarious as the Discharge from the Lungs can scarcely be considered to take away excrementitious Matters from the Body, nor can we determine the Action of these to the Breast in Preference to any other Part.

Ground Ivy, Hyssop & Pennyroyal act by Stimulating the Mucus Glands in the Breast, but



73  
their Effects are precarious - Elicampne is more acri-  
d than the former & has been considered a better Pectoral.

Squills are still more acrid & Stimulating. They  
act as Emetic Purgative & Diuretic. The Prepara-  
tions most commonly used are the Vinegar & Oxymel  
the latter of which is the most disagreeable & nau-  
seous. The Vinegar sweetened with Sugar answers every  
Purpose of the Oxymel & is much more agreeable.  
Squills are generally given in every Complaint of the  
Breast. Diseases of the Breast & Lungs may be re-  
ferred under three Heads. As they arise.

1.<sup>st</sup> From Inflammation 2.<sup>d</sup> Obstruction 3.<sup>d</sup> Spasm.

All Complaints of the Breast may I think be referred  
under one or other of these Heads. In all Expecto-  
rations proves the natural Solution of the Disease & it is the  
Business of the Physician to know how this may be  
best promoted & as the Causes are different it is  
evident that the Cure must vary. Instances of the  
Inflammatory Diseases of the Lungs we have in  
the Peripneumony, Pleurisy & Consumption. Here  
the Cure must depend on the Antiphlogistic Regimen  
& Method, that is Bleeding &c. Pectorals have seldom  
a Place in our Indications tho' they are too often employ-  
ed, for here the Expectoration is a Consequence of the In-  
flammation & we can not bring it on before the Inflammation



74<sup>th</sup> is lessened. The best Method of promoting Expectoration is to keep the Fever moderate & to drink plentifully of mild Drink Liquids. If any Medicines are employed none will favor Expectoration better than Antin<sup>o</sup>. Wine or small Doses of Spicac: In the Consumption a similar Method is to be pursued, small but frequent Bleedings, gentle Emetics & above all a Milk Diet & Vegetable Diet with moderate Exercise will do more Service than all the Pectorals ever invented; the Lives of many have been saved by this Method & thousands have been destroyed by a contrary Treatment. These Pectorals, whether the natural or artificial, Balsams, Syrops or Oily Emulsions prove hurtful by their acrid & stimulating qualities or they destroy the Tone of the Stomach by loading it with Indigestible Substances. These may occasionally palliate the Symptoms, but they can never contribute any Thing to the Cure. They ought not to be used by a Physician at least until he is convinced of the Impossibility of any other Medicine affording Relief. In the Consumption as well as other Diseases attended with Coughing there is frequently a Symptom



which is very troublesome & which considerably <sup>75</sup>  
aggravates the Disease. This is a constant Tickling  
in the Throat producing an incessant Cough. This  
may be removed by mucilaginous & Sweet Sub-  
stances held in the Mouth. They palliate the  
Symptom but do not contribute much to the  
Cure. The best Method I know is to hold a Lump  
of Gum Arabic in the Mouth & let it dissolve gra-  
dually by which its Effects will be extended into  
the Trachea.

2<sup>nd</sup> Obstructions of the Lungs are three Kinds  
viz<sup>t</sup> Scrophulous, Tuberculous & Mucos<sup>a</sup>. The  
Scrophulous occurs in Persons liable to Consump-  
tions. The Scrophulous may have its Seat in the  
Lungs as well as in any other part of the System;  
it can only be known by the general Habit of Body;  
it is to be treated in the same Manner as Scrophula  
in any other part by Mercurials, Mineral Waters and  
Hemlock. We have Instances of these Obstructions being  
cured by each of these Medicines; the *Cixuta* I have my-  
self known useful. The *Tussilago* or Colts Foot is recom-  
mended by D<sup>r</sup> Fuller in the Scrophula & D<sup>r</sup> Cullen  
subscribed to its Usefulness. D<sup>r</sup> Fuller likewise recommends  
it in Consumptive Habits. From his Testimony it deserves



76  
to be employed in Scrophulous Obstructions of the Lungs & I should have frequently employed it, but that it does not grow in this Country & it is said to be more Effectual when fresh than when dry. Tubercles are <sup>the</sup> most general & frequent Cause and Foundation of Consumptions & they are the most difficultly cured. Of Obstructions from Mucus we have an Instance <sup>in</sup> the Humoral Asthma & these Diseases which are said to arise from Pituita Frigida. If acrid Stimulating Pectorals are over proper it is in Diseases owing to Pituita Frigida. Here the natural & artificial Balsams Squills & Elecampane may be used to excite the Action of the Vessels & enable them to throw off the Mucus which chokes up the Bronchia. These Complaints are seldom attended with Fever and here Antispasmodics & Stimulants are the best Remedies, as Asafoetida, Gum Amm: Garlick. as recommended in the Catarrhus Senilis. They should be taken in large Quantities & continued for a considerable Time.

3<sup>d</sup>. Diseases of the Breast are owing to Spasm Here Antispasmodics only can be used with Advantage. Opium is the Chief Remedy on which we



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depend. On the Solution of the Spasm Expectoration  
takes place. Under the Article of Opium I told  
you that by checking Expectoration it might lay  
the Foundation for obstinate Obstructions in the  
Lungs. When we use Opium therefore it will be  
necessary <sup>to counteract</sup> Squills or some Antimonial Preparation  
with it to obviate this Tendency, when by Means  
Antimony or Squills we obtain all the good Effects  
of the Opium without its Disadvantages  $\frac{3}{i}$  of  
the Vinegar of Squills  $\frac{3}{iv}$  of simple Cinnamon  
or Peppermint Water with Gutt: L. X. Laud: will  
form an agreeable & Efficacious Mixture of which  
a Table Spoonful may be taken every two Hours  
If the Squills should prove too nauseous we may  
substitute Antimonial or Spicac: Wine. This Mixture  
will be of singular Use in the last Stages of Con-  
sumption where it is in a Manner our only Re-  
source as it eases without shortning the Days  
of our Patient. By attending to these Circumstan-  
ces you will be enabled to form an Idea of the  
Use of Expectorants & know when they are useful  
& proper —



# Lecture 31st.

## Sialogoga.

These are such Substances as increase the Discharge of Saliva from the Glands in the Mouth. All acriid Substances when held in the Mouth will Stimulate the Glands to more copious Secretion & Excretion of the Saliva. No Medicine taken internally & mixed with the Mass of Blood except Mercury will have this Effect constantly. Quick Silver has had more Attention paid to it than all the other Metallic Substances put together. Some suppose that Mercury acts chiefly on the Fluids; but more accurate Observations demonstrate that it acts upon the Solids & that its Effects are owing to its Stimulating Quality. Many Physicians suppose that Mercury prepares the Fluids to pass off by particular Secretions, but its Action may be explained upon its Stimulating Power. During the most copious Use of Mercury internally, Observations do not show that the Fluids are altered from their natural State, at least not more than from any other Inflammatory Stimulus.



79  
Instead of the Blood losing its Consistence it shows more Marks of Visidity & inflammatory Lensor. Mercury is a more general Stimulus than any other Metal. It acts upon the Stomach, Intestines Urinary Organs the Excretories of Uters & many other Parts of the System probably where its Effects are not so discernible. The principal Objects of its Stimulus are the Salivary Glands. This Effect is peculiar to it & no other Medicine hitherto at least has been discovered which passes off by or stimulates these Organs. As this is peculiar to Mercury, so is it its principal Action & it has been the great Aim of Physicians to obtain its Action with equal Certainty in some other Way. Mercury acts upon the Stomach when the Preparation is very acid & more soluble, but it is necessary it should be taken in a large Dose. It operates upon the Intestines when the Preparation is mild from a contrary Quality that is, from not irritating the Stomach & being more insoluble; here also it must be taken in consider-



80  
rable Doses. Either the acid or mild preparations when taken in small Doses are carried into the Mass of Blood. If the preparation is very acid it proves a general Stimulus to the System & stimulates the common Excretories of the Body & soon passes off by perspiration or Urine. But if the preparation is a mild one or an acid one taken in small Doses & repeated at considerable Intervals it is accumulated in the System & never fails to stimulate the Salivary Glands. This Effect does not depend on Specific Gravity or any Mechanical Quality but from a Chemical Quality which disposes it to unite with one Portion of our Fluids sooner than another. There is no Foundation to suppose that it prepares the Blood to be carried off by the Salivary Glands. If it gives Fluidity to the Blood why does it pass off by the Salivary Glands than by the other Emunctories? Why it affects the Salivary Glands in preference to the other Parts is not very evident; it appears to depend on a particular Chemical Relation. It does not Stimulate the Glands by any Specific Property but by the same Principle that it stimulates other Parts.



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It acts on the Salivary Glands only by being accumulated in them & stimulating them in the same Manner that any acrid Substance would do that could arrive at them. For a proof of this Mercury applied to the Salivary Glands externally produces a Salivation & its Effects are more sudden & stronger than when taken internally this is Evident in Mercurial Vomits. G. r. or G. v. of Turpeth Mineral will Vomit & infallibly induce a Salivation & that immediately by stimulating the Salivary Glands in passing over the Tongue in the same Manner that Arsenic inflames the Oesophagus, Fauces Tongue &c. as it passes over them. The Saliva has a peculiar Factor - this depends on the increase of the Excretion; for there is no Instance of any Secretion being increased without a Change is produced in the Secretory Organ & does not depend on any Affection of the whole Mass of Fluids. We find that when a Salivation comes on Spontaneously when we are sure no Mercury has been taken the Saliva has the same Factor & appearance as if Mercury had been given. Mercury in the State of Vapor has considerable Action on the Nervous System & produces Torpor Tremor & Palsy & whether in any State it is free from these Effects is doubtful. This Property of



82 Mercury in exciting Palsy is more Powerful in a State of Vapor as is evident from its Effect on Miners & Tradesmen who are much exposed to the Fumes of Mercury. When taken into the Body in its saline State it only exerts its Stimulant Effects & seldom or never is narcotic.

We shall now consider the Diseases in which Mercury is proper & first of the Lues Venerea where Mercury is the Sovereign Remedy.

The Lues Venerea is properly divided into two Species - viz. the Gonorrhoea & Syphilis or confirmed Pox. These require different Methods of Treatment.

In the Gonorrhoea it is evident the Disease is local & totally confined to the Glans Penis & never except in extraordinary Cases extends to the Prostate Gland & Neck of the Bladder & appears to be a topical Inflammation without Ulceration. This sufficiently explains every Symptom. In this View of the Matter it appears that the internal Use of Mercury can contribute little or nothing to the Cure. We may add Calomel to our Purgatives but it will have no immediate Effect



in curing the Disease. It may have some tendency to diminish the Inflammation ~~in every other Part~~ as we find it to diminish ~~the~~ Inflammation in every other Part. The Cure of the Disorder is more simple & easy now than it was even a few Years ago when the Nature of it was not so well understood. This we shall now relate after giving a more speedy Method than has usually been pursued. M. Fordyce in making Experiments with the Caustic Alkali found that it dissolved the Mucus of our Body more speedily than any other Substance, he therefore naturally concluded that if a weak Solution was injected into the Urethra in the Beginning of a Gonorrhoea the Disorder might be cured radically before it arrives at any considerable Height. He soon had an Opportunity of trying it; he injected a weak Solution of Sal. Tar into the Urethra & by this cured the Disease radically. Many Gentlemen at Edinburgh repeated the Experiment after having voluntarily received the Infection & they never found it fail. It ought to be used in the first appearance of the Symptoms & before the Inflammation has arrived at any Height. If used when the Inflammation is considerable it occasions great Pain & Agony. The Solution



84 should be weak enough to be easily borne upon the Tongue. I shall now deliver the Method I generally pursue in the Treatment of Gonorrhoea

I order the Antiphlogistic Regimen & Course if the Patient is strong & Plethoric we order Bleeding & it will be proper to keep him on a low Vegetable Diet with Milk - keep the Bowels open with gentle Laxatives. We order him to inject into the Urethra Oil of Olives or what I have found to answer better than any Thing else an Ounce of Mercurial Ointment without Turpentine or any acrid Substance dissolved in  $\text{℥viij}$  of Oil of Olives & a portion of this may be injected into the Urethra Morning & Evening - All these tend to lessen the Inflammation. It is improper to give acrid Purgatives as these irritate the Rectum which is communicated to the Urethra, The best Way to keep the Bowels is by a cooling Diet or mild Purgatives  $\text{℥j}$  of Glaubers Salt may be taken 2 or 3 times a Day - nothing is more proper than Castor Oil or some Purgative that acts without Irritation. Warm Fomentations or immersing the Penis in warm Water 2 or 3 times a day will also contribute to lessen the Inflammation. When the Ardor



Urine is so great that the Patient cannot make  
 Water. Morgagni advises to keep the Penis in warm  
 Water & to let the Urine pass off gradually. Warm  
 Fomentations tend to alleviate the Chordee. topi-  
 cal bleedings on the Penis or in the Perinæum  
 will be of singular Service. When we use sweet  
 Oil for Injections we should be careful what kind  
 we employ. Sweet Oil by Age becomes acrid & rancid  
 & if used in this State will heighten the Inflammation.  
 When this Method is pursued the Disease will surely  
 exceed a Fortnight. When the Inflammatory Symp-  
 toms are thus relieved & the Discharge is a thin  
 white pellucid Mucus, this may be checked by  
 moderately astringent Injections such as a weak  
 Solution of white Vitriol.  $\text{ʒij}$  or  $\text{ʒfs}$  may be dissolved  
 in 6 or 8 Ounces of Water. To lessen the Acrimony  
 of the Urine during the Inflammatory Stage the  
 Patient should drink plentifully of mild diluent  
 Liquids, such as Milk & Water, Emulsions of  
 Gum Arabic Marsh Mallows, Linseed &c these  
 dilute the Acrimony of the Urine & diminish the  
 Scalding. The Chordee may likewise be relieved  
 by keeping the Penis confined during Sleep & taking  
 an Anodyne at Night. In my own Practice I have



for some years intirely dropped the Use of Injection  
 & have trusted the Cure to small & repeated Doses  
 of Gum Arabic with the Antiphlogistic Regimen  
 & an Anodyne at Night—

In Disorders of the Urinary Passages where In-  
 jections have been recommended & used for the  
 Cure I suspected them to be the Cause of Caruncles  
 Constrictions & Gleets— This induces me to lay them  
 aside & I did this the more readily as I found the  
 Disease might be cured as effectually without them  
 If you look into Swediaur & the best Authors you  
 will find they entertain much the same Sentiments  
 respecting it with myself. I have lately  
 had a Case which strongly confirms this—  
 A Gentleman who had frequently been cured  
 of a Gonorrhoea by injecting a Solution of Cor-  
 rosive Sublimate in water into the Urethra  
 upon again receiving the Infection had re-  
 course to the same Application & it appar-  
 ently proved effectual in relieving the  
 Disorder. After a few Days he was attacked  
 with a fever with a painful sensation in  
 the lower Part of the Abdomen with slight



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Obstruction in the urinary Passages. I suspected  
the Injection to have been the Cause of all this  
mischief & ordered bleeding with Antimonials  
& Calomel which in a few days relieved the fever,  
but the Gonorrhoea returned with as much Violence  
as ever, the uneasiness is not even yet removed.  
He will probably experience all Effects  
from it as long as he lives.

A confirmed Lues or Pox appears in various  
Shapes. It has often lurked in the System for  
many years without shewing its Effects. We have  
Instances of Children being afflicted with it on  
whom it was entailed by their Parents while  
these did not apparently suffer from it. A Gentleman  
had been 12 Years married when he  
was seized with an Ulcer in the Neck of the  
Bladder - the patient had the Venereal Disease  
before Marriage but had not been connected  
with any Woman but his wife since  
that Time. The Disease was nevertheless considered  
as venereal & was treated as such & cured.  
Here we see that tho' the disease had  
lurked in his Constitution for 12 Years the  
Ulcer in the Neck of the Bladder was consi-



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died as a Venereal Complaint Cured by treat-  
ing as such. When the Disease appears with  
Buboes, Rots & Effluences there is little  
Difficulty in distinguishing it. The following  
is in general the Course of the Disease.

Buboes appear in the conglutinate glands, severe  
pains are felt in the head & joints of the extre-  
mities with little or no remission or inter-  
mission; these are always worse when the  
Patient is heated in Bed & emit on sitting  
up; the mind is dejected, the strength im-  
paired; Pustules appear on the Skin particu-  
larly of the face & forehead & the Scabs are  
of a yellow Colour. In Process of Time Exos-  
tores are formed in the Perosteum particu-  
larly of the bones of the head, legs & arms;  
the affected Bones sometimes become cari-  
ous; Phagendemic Ulcers attack the Nose,  
Throat & Palate; There is a loss of Sight  
Hardness of hearing & fetid breath. all the  
animal & vital functions are debilitated  
an hectic fever gradually wastes the pati-  
ent untill Death closes the scene.



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Mercury in this Disease is the Sovereign Remedy  
 It is only about the best method of administering  
 it that Physicians have disputed. Upon  
 the whole the most simple preparations are the  
 mildest & answer the purpose best provided  
 they are well triturated. By being mixed  
 with Acids it becomes more acid & stimu-  
 lating but does not exert any greater virtues  
 than the Quicksilver pill or Ointment. The  
 Acid Preparations will sometimes sooner re-  
 lieve the Disease & more speedily effect a  
 Cure. If the Disease is situated in the exte-  
 rnal parts of the body the acid Preparations  
 are most proper & will answer as they sty-  
 mulate the different Excretories & are thus  
 applied to the parts most affected. In these  
 Cases & whenever we wish to avoid a Sali-  
 vation Van Swieten's Solution of Sublimate  
 is most proper.

℞ Merc. Corros. Subl.

℥ss. Putrificat. ferment ex hordeo  
 vel Seale

℥j

} 3CXX Solvent

But in internal Affections & in persons disposed  
 to Consumption the mild preparations are



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most proper as they remain longer in the system  
The Salivation from Sublimate is more trouble-  
some than from the milder preparations; the  
Inflammation in the Mouth continues longer  
& is more violent & alarming. I generally com-  
bine about  $\frac{1}{4}$  grain Sublimate with  $\frac{1}{2}$  grain  
of Opium which may be formed into a pill  
& repeated 2 or 3 Times a Day. But I have  
known even this to affect the Mouth especi-  
ally in cold weather. The Caustic Alkali  
decomposes Sublimate; this therefore is the  
best Remedy when Sublimate has been ta-  
ken in too large a Quantity - a strong ley  
of Ashes will answer equally well when  
this is not at hand. In the Ed. Med. Comm. d.  
we have several Instances of persons being  
saved who had swallowed Sublimate  
by means of the Caustic Alkali. This gives  
us a Caution in our prescriptions for  
when we combine any Alkali with our  
Sublimate it destroys its Effects in pro-  
portion to the Quantity of Alkali. We  
should always avoid Salivation if possible



This is now the universal Opinion of the best Physicians. Salivation is only employed because it is the most certain Criterion of the Mercury having taken effect. We can produce the same Effects without the disagreeable Circumstances attending Salivation. This may be done if we give the mild preparations in small Doses keep the body & Chamber warm drink plentifully of the Decoction of the Woods or other warm diluting drinks & using warm bathing, particularly in Summer. M<sup>r</sup>. Plenk of Vienna gives a preparation of Mercury with Gum arabic which he tells us never Salivates - but I have seen it salivate several, tho' it is longer in producing this Effect than some other Preparations of Mercury. This Preparation ~~however~~ seldom Salivates if the other Directions are adhered to.

If there are Buboes they are to be disincised by Mercurial Frictions applied about half an Inch below the Swelling. Some advise us not to dis<sup>cut</sup> Buboes but to let them come to Suppuration as they think the Matter will be evacuated more effectually & there will be less danger of its being communicated



9<sup>th</sup> to the Blood. But this is erroneous - there is certainly more danger of Absorption after Matter is formed than if it is destroyed in the Beginning before it comes to Suppuration.

The Mercury is the principal Remedy for the Venereal Disease, it is not the only one - Kennedy's Decoction or the Lisbon Diet Drink I told you has been found to cure it effectually & speedily. There are certain Plants that grow in this Country which the Indians employ for the Cure of Venereal Disease - These were imparted by the Indians to Sir W. Johnson & he communicated ~~to~~ them to M<sup>r</sup>. Kalm a Swedish Gentleman, who was sent some Years ago into this Country by the Academy of Sciences at Stockholm for the Improvement of Natural Knowledge. M<sup>r</sup>. Kalm describes these Plants in the Swedish Transactions. The principal one appears to be a Species of Lobelia & is denominated by Linnæus the Lobelia Syphilitica & is said to grow in every part in this Country. M<sup>r</sup>. Kalm also describes the Method of using them. They take the Roots of 4 or 6 Plants wash & drain them well (some prefer the fresh some the dry) they



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boil these Roots in 3 Quarts of Water of which the Patient is to drink as much every Morning as he pleases - he is to use it for his common Drink. It is to be taken in such Quantities as not to prove purgative - the Patient must not be indulged in the Use of Spirituous Liquors; he must live chiefly on Vegetables with now & then a little Meat. This Course is to be continued two or three Weeks in which Time the Disease will generally be cured. He is to wash the Ulcers, if any, with the same Decoction: If the Disease is very virulent they add some of the Roots of the wild *Tanunculus*; this Vomits & purges & is generally effectual. M.<sup>r</sup> Kalm tells us that he met with a Person that had been cured by an old Indian Woman who still had by him some of the Leaves of the Plant with which the Cure had been performed these M.<sup>r</sup> Kalm found to be the *Lobelia Syphilitica*.

From this Account we see that there are Vegetables of at least equal Efficacy without the disagreeable & unfriendly Effects of Mercury in curing this Disease. We know that the Pox is no uncommon Complaint among the Indians - It is equally certain that they have no Mercury



9<sup>th</sup> to cure it & yet they often cure white People who put themselves under their Care. This seems to be confirmed by Kalm's Opinion. It has long been doubted whether any Vegetable Substances will cure the Disease - The Lisbon Diet-Drink & Kalm's tend to shew that they will. A Vegetable was sent to me last Summer by D.<sup>r</sup> Golding of the Island of Barbados with an Account that in every Stage of the Venereal Disease it was an effectual Remedy. It was tried in one or ~~more~~<sup>two</sup> Instances Cases in the Pennsylv.<sup>a</sup> Hospital while D.<sup>r</sup> Rush attended there & apparently with good Effect. The plant appears to be a Species of the Euphorbia. All the Species of Euphorbia appears to be active Vegetables. There are some Species grow here which in all Probability possess similar Virtues. This seems to confirm the former Opinion that this Disease may be cured by Vegetables as well as Mercury. *At*

Mercurial Ointment has been recommended for the Cure of Hydrophobia from the Bite of a mad Dog. Desault & Choiseul an Apothecary of the Religious of that Order & a Jesuit, both recommend it for the Bite of a mad Dog. The latter assures



us that he had known no less than 300 cured by <sup>95</sup>  
this alone. Its Use is confirmed by that celebrated  
Sawage of Montpelier. We can scarcely doubt  
but that the internal & external Use of Mercury  
may prove useful in preventing this dangerous  
Disease from coming on. The Mercury should be  
used as soon as the Bite is received & continued till  
a Salivation comes on; after Hydrophobia has come  
on there is generally too short a time for any thing  
effectual to be done. It is seldom cured after it  
has once taken place. I have had but one Opportu-  
nity of observing its Effects. Some Years ago a Child  
was bitten by a Dog said to be Mad. The Sore was rub-  
bed every day with Mercurial Ointment for a Fort-  
night when the Sore healed up & the Child continued  
well. I am far from being convinced of the Efficacy of  
Mercury in this Disease from this Case as I am by no  
Means certain the Dog was mad, <sup>he being</sup> ~~as he was~~ killed  
immediately after having bitten the Child together  
with several other Dogs which he had bitten. From  
some late Observations of D.<sup>r</sup> Fothergill it appears  
that neither this nor any other Remedy is certain and  
infallible in the Cure of the Hydrophobia. A Gentleman  
lately dispensed a Powder under the Name of the —



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Orms Kirk Remedy which was said to be effectual  
for the Bite of a Mad Dog & maintained an undoubt-  
ed Reputation until unfortunately a Gentleman  
of Eminence in London was bit by a Mad Cat  
& died of the Hydrophobia notwithstanding Orms  
Kirk Remedy immediately after being bit. Mer-  
cury is likewise employed in a Number  
of other Diseases. It is used in all Kinds of Obstruc-  
tions & Sores. When on Cancers I told you it might  
be useful in Scrophulous Cancers, but that it is  
hurtful in genuine Cancers & Schirri. It may be  
used with Advantage in Schirrous Obstructions  
of the Viscera & Diseases arising from this Cause;  
hence it has lately been used with singular Suc-  
cess in Dropsies which are frequently owing to  
these Obstructions. It is useful in foul Ulcers and  
Sores where by its Stimulus it produces that Degree  
of Inflammation <sup>which</sup> ~~that~~ is necessary for the formation  
of good Pus. Of its Use in Killing Worms we shall  
treat under the Head of Anthelmintics.

Crude Mercury has been recommended in  
certain Complaints, particularly in violent Obstruc-



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tions of the Bowells. Here 2 or 3 Ounces are directed  
to be taken at a time until the Patient has taken  
a Pound or more. But this is a dangerous Experi-  
ment as a Volvulus is often the Cause of this Com-  
plaint - that is when the superior Part of the Intestine  
is received into the inferior, when the pressure of any  
Thing above would increase the Disorder, and if too  
great a Quantity of Mercury is taken it might even  
occasion a Rupture of the Intestines. A Case  
should be desperate indeed before we have Recourse  
to such dangerous Experiments. When the Obstruction  
is owing to hard Faeces lenient Purges & emollient  
Glysters will most effectually remove it.

The Yaws are a disorder that resemble the Venere-  
real Disease tho' they are not the true Lues. It is  
common on the Coast of Africa & the High Lands  
of Scotland. The Patient complains of a frequent  
pungent Pain in the Throat & difficulty of swallowing  
his Mouth is dry & his Breath has a peculiar  
Fetor; glandular swellings appear under the Ears  
& lower Jaw - these Symptoms continue several  
Months, Pustules about the size of a Pea appear  
on the Root of the Tongue; Ulcers are formed in the



98 Throat, over the whole Mouth & Palate; the Eyes and Ears appear red & inflamed; the Ears are affected with Pain & a continual Noise; Eruptions appear in the Loins Back, Loins, Groin & Genitals, they by Degrees run together & form one large foul Ulcer with violent itching. All these Symptoms do not occur in the same Person; in some the Mouth and Fauces only are affected; in others the Groin, Private Parts & Loins; some are tormented with continual Pains in the Bones & even Exostoses and Caries. This shows the great uncertainty in this Disease. It is sometimes more infectious than the Venereal Disease, & there <sup>are</sup> instances of Persons catching <sup>it</sup> from drinking out of the same Cup with infected Persons; Tho' there are Instances where 2 or 3 <sup>of a</sup> Families have escaped while all the rest were infected with it.

It requires nearly the same Method of Cure as the Pox by treating it with Mercury & the Decoction of the Woods. It is <sup>in</sup> general not so tedious nor so difficult to cure as the Pox, but it is apt to return in a few when however it is seldom so bad as at first.



Mercury is an effectual Remedy for the Glands  
This Disease is particularly incident to Children. It  
never attacks Children above 12 Years of Age & seldom  
those above 6 or 8. It attacks those chiefly who apparent-  
ly enjoy the best State of Health & Spirits & of a gross  
full Habit of Body. It is slow in its attack. The  
Child droops & appears drowsy & heavy & does not  
join in its usual childish Amusement, a little hoarse-  
ness generally attends by which the Parents are de-  
ceived & believe that the Child has caught cold, but  
it has no Cough; at Times the Pulse is quick with  
momentary Flushings of Heat; the Child feels no  
Pain except dull Sensation at the Head of the Trachea.  
These Symptoms continue for 2 or 3 Day when the  
Disease puts on a more alarming Appearance.  
The Breathing now becomes more quick & laborious;  
the Muscles of the Abdomen are contracted with the  
utmost Force in order to dilate the Thorax; the  
Voice is either intirely lost or acquires a peculiar  
Shrillness like the crowing of a Cock; the Face is  
overspread with a deadly Paleness & is sometimes ~~it~~  
of a livid Color; the Pulse becomes very quick & small



and the Child is in <sup>the</sup> most imminent Danger; a Sweat breaks out upon the Face & Neck & sometimes over the whole Body. During all this Time the Child appears easy, owing probably to the Absence of Pain. Tho' the Symptoms are so very alarming they sometimes remit & the Child appears better; but this is only a short Truce; the Symptoms soon return with redoubled Violence & unless the Child is relieved it will soon be suffocated. But during these Remissions the Child is not intirely free from the Disease; the difficulty of Breathing & Wheezing still continue owing to the Obstruction in the Trachea; the Voice neither does recover its Tone. The Disease should never be considered as cured until the Wheezing is gone off intirely & the ordinary Tone of Voice returns. There are other Symptoms which are adventitious and are only occasionally present - The Face is sometimes red & swelled; the Patient is sometimes Thirsty the Urine is with or without Sediment; the Child sometimes has a Disposition to puke.

The Appearances upon Dissection after Death demonstrate that there is too large a Quantity of Mucus collected in the Trachea & is sometimes



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hardened into a tough Membrane. They appear to be the immediate Cause of the Death of the Patient. In one Case this Membrane was found to extend a considerable Way within the Bronchia. Dr. Francis Hume has given us the Dissection of 9 Persons who were carried off by this Disease & the Appearances were the same in all if we make allowance for the different Times the Disease had lasted in the different Persons. In some the Mucus was poured out without any Change; in others it was hardened into a Membrane & in others purulent Matter had begun to be formed. I have had two Opportunities of observing the Appearances after Death. One in a Boy 4 Years old who had been attacked with the Disease 2 or 3 days before. Upon opening the Trachea we discovered a tough white Membrane which extended within the Bronchia. This adhered so firmly to the lower Part that it could not be separated without Laceration & in other Parts it was entirely distinct & loose from the Membrane lining the Trachea. The other was the Case of a Girl who died of this Disease after a few Days Illness. The Trachea was filled with a white Mucus for the Girl died before it could be hardened into a Membrane.



102. With Respect to the Proximate Cause of this Disease we must adopt that which D.<sup>r</sup> Hume has delivered. After relating the various theoretical Opinions of Persons who never had an Opportunity of observing the true Nature of the Disease, he goes on to observe, that all these fanciful & erroneous Opinions fall to the Ground when we inspect the dead Body. From that true Source of Knowledge we learn that the Cause of this Disease is a preternatural white thick tough Membranous Crust or Mucus in the Trachea. This Membrane is sometimes so tenacious that it will sometimes remain soaking in Water many Days without dissolving.

We are next to inquire how this Membrane is formed. For the necessary secretion we find that all young Animals abound with Mucus or glutinous Lymph, all the Solids we find in them seem in a gelatinous State. In Children this Abundance is necessary to supply Nourishment to the growing Solids. This is the Reason why it is peculiar to a certain Age & at once accounts for its attacking Children of a gross full Habit of Body —



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It most commonly occurs in Autumn especially if the Season is moist. It seldom occurs in hot & dry or in cold & dry Weather. It occurs in Summer & Winter only when the Weather is damp.

From ~~all~~ <sup>this</sup> it appears that the Proximate Cause consists of in a too copious Secretion of Mucus from the Glands of the Trachea which naturally secrete a Mucus to moisten the Trachea & to defend it from the Air which would otherwise soon dry up these Parts in passing to & from the Lungs. When therefore it <sup>happens</sup> ~~appears~~ that too great a Quantity of this Mucus is secreted, it often happens that Children are not attentive enough or from their being too young are not able to throw it up by coughing, the thinner Parts will be carried off by the Air in Perspiration while every circumstance favors its concretion with a solid hard Membrane & the continual secretion keeps it from adhering to the Trachea. I have mentioned this so particularly because you will find Doctor Cullen entertains a different Idea & also treats it in a different Manner from what the Physicians here have found effectual —

The Hives have been confounded with a Spasmo-  
dic



the Disease of the Lungs to which Infants are liable intirely different from them. Spasmodic Disorders of the Lungs come on suddenly & go off quickly. In the Hives the Children are ill 2 or 3 Days before the Disorder arrives at any considerable Height. Spasmodic Disorders are periodical & are accompanied with a discharge of Pale Limped Urine which is not the Case with the Hives. In Spasmodic Disorders the Voice is not changed. A change of the Voice is the Pathognomonic Symptom of the Hives. Persons subject to Spasmodic Disorders of the Lungs are free from all Complaints after the Paroxysm is over, this never takes place in the Hives, for tho' there are in this Disorder Remissions the Patient is not intirely clear from the difficulty of Breathing &c until there is not the least Obstruction remaining. In all Spasmodic Constrictions of the Lungs, the Secretion of Mucus is suppressed, thus in Spasmodic Asthma there is no Secretion of Mucus during the Paroxysm & this is relieved as soon as the Excretion takes place. In the Humoral Asthma the Reverse happens. In the Hives there are evident Signs of



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a Collection of Mucus in the Trachea & this may be  
distinctly heard to rattle. No Spasmodic Disorder  
proves fatal on the first Attack. The Hives <sup>are</sup> most  
commonly mortal. Spasmodic Disorders of the Lungs  
are relieved by Bleeding Blistering & Antispasmo-  
dics but these are used in the Hives without Effect.  
The Hives differ from Spasmodic Disorders in  
their Symptoms, Termination & <sup>Method</sup> of Treat-  
ment, they are therefore not a Disorder of the Spas-  
modic Kind & the Proximate Cause consists in too  
great a Secretion of Mucus in the Trachea. The  
predisposing Causes are a wet or moist Atmos-  
phere & a gross habit of Body. The Occasional  
Causes are any Thing that will relax the Mouths  
of the Glands which pour out their Mucus into the  
Trachea. This we conclude from Analogy. When  
the Stomach is weak & relaxed it pours out a  
Quantity of tough Phlegm. From a weakness  
or relaxation of the Glands in the Urethra a  
Gleet is produced &c. —

We are now to explain the Symptoms that occur: The  
hoarseness Change of Voice Abolition of the Voice are  
owing to the Collection of mucus in the Trachea  
obstructing the Glottis — when the Mucus fills the



106 Glottis the Voice is intirely lost when it is only partially obstructed, the Voice becomes shrill. This is prettily illustrated by a case related by Dr Hume communicated to him by Mr Balfour. A Child had died with all the Symptoms of the Hives particularly the shrill Voice. Upon opening it a piece of Shell which the Child had sucked in was found lying across the Trachea about an Inch below the Glottis.

The laborious Breathing is a necessary consequence of the Obstruction & difficult Passage of the Air. The difficult passage of the blood thro' the Lungs accounts for the increased Respiration & Change of Colour which occurs in the face.

The total Absence of Pain is owing to the Mucus between the Membrane & Trachea preventing the pain.

As to the Prognosis we may observe that the Disease is divided into two Stages. It is generally to be considered as a dangerous Disease as it is silent in its Approach & as alarming Symptoms appear till Death is at hand. The first Stage often passes unobserved as the



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Children are generally too young to complain & before  
we can distinguish the disease Death is upon  
them. If we are not called in till the 4<sup>th</sup> Day the  
Case is generally dangerous. If we see the Patient on  
the first or second Day & the breathing is not very  
labourous; if the pulse is strong & firm; if the voice  
is strong & is changed only in crying & coughing  
& is otherwise natural we may entertain flatter-  
ing Hopes. The first Sign of Safety is that the  
Cough becomes stronger & less dry with the Signs  
which attend moist Lungs. The Case is desperate  
when the Membrane is once formed. Nature  
indeed by a critical Coughing may eject the Mem-  
brane but as the Sensibility of the Trachea is  
entirely destroyed this Cough will seldom be expec-  
ted.

As to the Method of Cure Bleeding is sometimes  
ordered but I much doubt whether it is either  
necessary or proper. When the Child is plethoric  
we may order bleeding to alleviate the diffi-  
culty of breathing & to expedite the transmission  
of the Blood thro' the Lungs. If the Proxi-  
mate Cause we have assigned is right Bleed-  
ing can be of no Service to cure the Disease  
but may alleviate the Symptoms. Histories may



be used on the same Principles. Vomits are frequently  
 given. I doubt tho' whether they are so useful as  
 has generally been imagined; they certainly en-  
 crease the Circulation of Mucus in the Trache-  
 ea. Purgatives will answer our Purpose much  
 better. They irritate the Stomach & Intestines.  
 & thus cause a derivation of humors to them.  
 Of all Purgatives Calomel stands the best  
 Chance of affording relief from its great In-  
 solubility it will irritate the Stomach &  
 Intestines from its peculiar attraction to the  
 glandular System it will promote a grea-  
 ter discharge of Mucus from the Stomach  
 & Intestines & as there is a considerable  
 Sympathy between the Glands in the differ-  
 ent parts of the Body by increasing an  
 Evacuation in one part you will dimi-  
 nish it in <sup>no</sup> other according to the old Max-  
 im that two Evacuations cannot exist in  
 the same Constitution at the same time.  
 Calomel therefore by increasing the Secre-  
 tion in the Bowels diminishes that in the  
 Trachea & therefore justly claims the first  
 Place among ~~Expectorant~~ Medicines used



in the Cure of this disorder. It is necessary to <sup>209</sup>  
give it in large doses & these should be frequently  
repeated. The following Case will show the Ef-  
ficacy of Calomel & the doses in which it may  
be given.

On the 3 Day of the Disease, I was called to a  
Child the only one of a Gentleman in this City  
to whom a variety of medicines had been given  
to no Effect. Vomits, Pediluviap. Blesters &  
Bleeding had by no means been neglected.  
Calomel was then proposed & given & tho the  
Child was but 10 Months old it took 20 Grs  
of Calomel in 16 Hours & by this was snatched  
from Death for in all human probability  
it must have been suffocated in 24 hours  
had not this Method been pursued. When  
I am called in sufficiently early I have in  
several Cases given it with equal success  
when the Disease has not arrived at its  
2<sup>d</sup> Stage & the Membrane was not formed.  
After the Membrane is formed all Assist-  
ance is generally too late. In this Case we are  
ordered to excite a Vomiting & there are  
Instances whereby violent straining to



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vomit the Membrane has been brought away  
but this will rarely succeed. It is better how-  
ever to try a doubtful Remedy than none.  
The Vomiting is to be excited by Tart. Emetic  
in considerable Doses. There is an instance  
in Hume of a boy 5 years of age who by coughing  
up the Membrane got immediate Relief  
tho he did not recover the natural Tone of  
Voice for 3 Months. If the Cough could be  
excited by Steams drawn into the mouth  
it might be effectual. I tried fumes in one  
Case to no Purpose, but this should not  
deter us from repeating the Experiment.  
The fumes of the Capsicum or common Long  
Pepper are found to excite a Cough sooner  
than any thing else; this therefore may be  
tried. It may at least convince the Pati-  
ent that every thing has been done that  
could possibly relieve him. —

Bronchotomy will be to no purpose &  
will by no means afford Relief unless the  
membrane is extracted as the Disease is  
seated below the Glottis the operation



can stand but a poor Chance of Success. The Child cannot remain in the necessary posture till the Membrane is extracted. This was the Reason that the Operation did not succeed which was tried by a Gentleman of Eminence in his Profession in this City.

The next Class we shall treat of are Emetics. The general Principles on which they produce their Effects you will find in Dr. Cullen's Materia Medica. We shall therefore immediately go on to treat of particular Substances & first of

Antimony. The distinguishing Property of this is its Emetic quality tho' it occasionally proves Cathartic diuretic & diaphoretic. Crude Antimony is composed of two parts - a Regulus and a Sulphur. The Sulphur was formerly supposed to possess particular Qualities, but more accurate Experiments demonstrate that it has all the <sup>proper</sup> ~~particular~~ Qualities of common Sulphur. The Virtues therefore reside intirely in the Reguline Part. Numerous & various Methods have been used to obtain this Regulus - hence the Variety of Preparations which <sup>to this day</sup> are kept up in the Shops as Witness of the Ignorance of Physicians who ascribe different Virtues to each preparation when they are intirely the same -



~~The~~ The Regulus is not active in the Human Body unless in a Saline State. It must be converted into a Saline State either before or after it is taken into the Stomach. The various Methods in which this is done you will find in every dispensatory & Book of Pharmacy.

Crude Antimony or the Regulus when it is combined with Sulphur which can not be affected by the Vegetable Acid is often intirely inert & exerts little or no Effects. But as the Antimony may be united with different Preparations of Sulphur & may occasionally meet with a Strong Acid in the Stomach it may prove an efficacious Remedy in some Cases. Still however it is uncertain & possesses no Advantages over more effectual Preparations which are more certain. If however we must employ it we should always prefer the Tops of the Cones which contain most Regulus & it should be reduced to an impalpable Powder that it may <sup>be</sup> immediately acted upon by the Acid in the Stomach. The Vin: Emet: & Tart: Emet: are prepared by combining Antimony with the Vegetable Acid. The Vin: Emet: differs in strength according to the Quality of the Wine as it is more



or less Acid - it is therefore uncertain in its Dose <sup>113</sup>  
& different Wines possess different Virtues so that  
not two out of 100 are exactly alike. Of all the  
Preparations of Antimony <sup>none</sup> ~~more~~ are more effec-  
tual & certain than the Tart: Emetic -

The Preparations of Antimony have been  
recommended for an almost innumerable Variety  
of Diseases & those of an obstinate Nature.

It will be difficult to give the Rationale  
of its Action in every Disease but we shall endeavour  
to give in those in which it is employed with Advan-  
tage

It has no Effect on the Fluids but its Action is  
confined to the Solids: It proves a very great Stimulus  
to the moving Fibres. But as we have not yet learned  
why one Substance has this Effect in preference to  
another, we are ignorant upon what principle  
every Preparation of Antimony excites Vomiting.  
Physicians have ever desired to have a Prepara-  
tion of Antimony that would prove Cathartic  
& diuretic without exciting Vomiting but it is not  
probable that such a Preparation will ever be  
obtained. The Stomach is not the only part of the  
Body that is affected by Antimony: its Effects are  
extended over the rest of the System by Consent



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or Sympathy. When we wish to avoid its Action  
on the Stomach it must be given in small Doses  
& repeated at considerable Intervals when it will  
pass the Pylorus & affect the Intestines. We should  
never give a second Dose until the first has  
passed over the Pylorus or we should give such  
Preparations as are of difficult Solution. The  
Saline Preparations given in Solution soonest  
excite Vomiting. It should therefore always be  
given in Solution when we intend it should  
act as an Emetic. As a Purgative we should  
give it in a Pill or Bolus. Its Effect are not  
limited to the Part to which it is applied but  
are extended over the Rest of the System. Hence  
D.<sup>r</sup> Pringle & Baker found Antimonial Prepa-  
rations the most effectual Remedy in Bilious  
Fever & Dysenteries & other Disorders of this  
Kind. It acts as a Sudorific on the same Prin-  
ciples as other Emetics - by stimulating the  
System in general & by the Consent that  
subsists between the Stomach & the Surface  
& the Sweat often breaks out before the  
Medicine could possibly have been diffused



over the System. It does not probably act as a diuretic from being combined & collected again in the Kidneys. It does not often act as a diuretic & when it does affect the Kidneys it is probably from Sympathy.

The Butter of Antimony given with a Solution of Sal. Amm; proves powerfully diuretic Tart: Emetic will sometimes have the same Effect especially in cold Weather when the discharge by the Skin is suppressed Some Preparations of Antimony have been said to promote Expectoration. Kermes Mineral has been recommended as an Expectorant particularly by the French Physicians but without much Foundation Given in proper Doses it will excite Vomiting & communicate its Stimulus to the Bronchia.

I have thus treated of the Virtues generally ascribed to Antimony. I am next to treat of the Diseases in which it is used & the Manner in which it operates

Vomits constitute a great part of our Practice Antimony is used in a variety of Diseases in which other Emetics may likewise be of Service. The principal Disease is Fever. It has long been esteemed a most excellent Febrifuge. It was at first kept a Secret among the Chemists & confined to them. They ascribed such great & Cardinal Virtues to it as almost



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to exceed the Bounds of Credibility. From later Experience it appears that too much can scarcely be said in its Favor. As it Vomits & purges Physicians supposed that it cured Fever by evacuating depraved & vitiated Bile. This is an erroneous Opinion - it is not probable that its chief Action is owing to this Circumstance. It may prove effectual occasionally when given in such a Manner as not to cause either of these Evacuations.

We find that it is an excellent Remedy in Rheumatism which is a topical Affection & in Inflammatory Fevers - Here it cannot possibly act altogether by expelling depraved Bile or vitiated Fluids. We are therefore to account for its Operations on some other Principles. As it is Emetic it proves diaphoretic by acting on the Stomach independent of being mixed with the Fluids of the Body. For this Purpose we generally give Part. Emeti. in small and repeated Doses so as to excite a nausea without vomiting. When the Sweat breaks out it lasts for 3 or 4 Hours & even after it ceases the Skin is moist for several Hours. It also generally gives one or two motions <sup>to</sup> for Stool. The Pulse generally becomes quicker



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& the Tossing & Delirium are increased. After a Time  
the Patient falls a sleep during which the Pulse  
becomes less frequent, softer & the Delirium abates.  
This is the Manner of its Operation in Continual  
Fever. 3 or 4 Doses put such an effectual Stop to  
the Progress of the Disease as to bring it to a Salutary  
Crisis.

We likewise use it in Intermittents. If given  
before the Paroxysm comes on by exciting a nausea  
& Sweat it puts off or considerably mitigates the  
Fit. Frequently too if it is an Irregular Intermittent  
that is, if it is not succeeded by a Sweat or a perfect  
Intermission, it will bring to a regular Type and  
give us an Opportunity of administering the Bark  
or other Remedies to prevent a Return. It may be  
given in Solution or Substance ℥. j or ij may be dis-  
solved in 3 ij of Water & a Table Spoonful given every  
half Hour until it excites a Nausea or even a slight  
degree of Vomiting. This then will afford us the proper  
Dose. If we give it in Substance we make it into  
Pills with Cons: Ros: & may give a  $\frac{1}{4}$   $\frac{1}{2}$  or a Grain  
at a Dose. You are to observe that a Person can take  
3 Times the Quantity in Substance that he can in  
Solution —



118 Tart: Emet: is not the only Preparations of Anti-  
mony that is used for this Purpose. Physicians have  
been anxious to find out a Preparation that would  
excite a Sweat without Vomiting. No one Prepara-  
tion possesses any Thing like a Specific Virtue—  
they all have the same Effects tho' one produces them  
in a higher Degree than another. James's Powder  
which is undoubtedly a Preparation of Antimony  
possesses no specific Virtues & is liable to all the  
Objections of calcined Preparations. I have seen  
James Powder used with Advantage in the Hospital  
at Edinburgh where Experiments were made on  
Purpose to describe its Nature & Virtues. It was al-  
ways found to be uncertain in its Operation & tho'  
in some Cases it proved an excellent Remedy in others  
it often produced no Effect but what might be obtained  
from Tart: Emet: with more Certainty. In my own  
private Practice I have sometimes administered it  
but always found it uncertain in its Operation &  
sometimes it did not produce any Effect. I have  
therefore intirely laid it aside more especially as the  
Preparation is kept a Secret. It is but lately that  
we have learned that this Medicine in Fact no longer



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exists as Dr. James has been dead 9 or 10 Years & died without disclosing his Secret & therefore what has been sold since that Time under that Name are merely Imitations & consequently Spurious. It is probable Dr. James had his Reasons for Keeping it a Secret & not disclosing it & that he consulted his Posthumous Reputation. It is indeed highly probable, that James took the Composition from some one of the many Preparations that were made when Antimony was first introduced into Medicine & that he was by no Means the original Inventor. We are indeed told that some Person contended the Matter with Dr. James & asserted that he had communicated the Preparation to him. This is the Case of many other Persons besides Dr. James who have vended for their own private Emolument different Compositions which had gone into Disuse & which are therefore considered by them as legal Property.

The celebrated Riverius made use of a Preparation which is Known under the Name of Antiquartzium Riverii. Antimony was supposed more in Bilious Intermittents & even Bilious Disorders of all Kinds if they prove purgative in a slight Degree - hence in the Antiquartz: Riverii, Calomel's



118 in the Pulvis Cornachini Scammony & to Tart: Emet:  
Glaubers Salt is generally added to cause a gentle  
Evacuation by Stool. To the former Preparations  
these additions may be necessary, but Tart: Emet:  
can scarcely be administered without <sup>pro</sup> having pur-  
gative; & therefore it is seldom necessary to add  
any Thing of this Kind. The celebrated D.<sup>r</sup> Huskham  
prefers the Antimonial Wine to all the Preparations  
of Antimony. But this is more uncertain than Tart:  
Emet: & it is seldom that two preparations possess  
the same Strength & it is neither so certain nor  
sudden in its Effects as the Tart: Emet: which is  
the most certain Preparation we can employ to  
overcome Spasm & terminate the Fever. As the  
Spasm continues thro' the whole of the Fever there  
is no Period when the Tart: Emet: is not proper;  
tho' it is more effectual when given early in the Disease

We are now to speak of its Use in Dysentery.  
Some Years ago it was common to use Speerac: with  
very great Success in the Diseases of this Kind —  
Hence it was concluded that all Emetics might  
be used with the same Advantages. At first indeed  
it was supposed that Speerac: acted by some specific



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Virtue, as its Success was great beyond Expectation but we now know that it possesses no such Power & that its Virtues are intirely owing to its Action on the Stomach, Intestines &c. It has been much controverted how Emetics act in Dysentery & how they effect a Cure. There is no Practitioner but what knows that they frequently prove very useful and even cure the Disease when they are administered in such small Doses as neither to purge nor Vomite. I think therefore that their good Effects must be, owing to their diaphoretic & sudorific Virtues. Anti-mony possesses these Virtues in a more eminent degree than any other Emetic. In Dysentery & Diarrhœa the Determination to the Skin & the Perspiration are checked if not altogether suppressed. Hence the Sagacious Sydenham considers Dysentery as a Fever thrown upon the Intestines whether it is brought on by Contagion or generated in the System. We are still certain that the Perspiration is impeded ~~by~~ & that the Humors are thrown upon the Bowels. We know that Diarrhœas are brought on almost in an Instant by exposing the Body to cold moist Air by which the Perspiration is suppressed. If this should happen in a moist warm Summer



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When the Humors have a putrid tendency, a Dysen-  
tery would be the Consequence. By restoring the  
Determination to the Skin we cut off the Source  
of the Disease & thus we remove, for take away  
the Cause, the Effect ceases. As Ipecac: has been  
employed in this Case with Advantage & as we  
have shown its Effects to be owing to its Diaphore-  
tic Virtues; it is highly probable that a Medicine  
that possesses this in an equal or higher Degree  
will produce equal or superior Effects. This we  
would conclude from Theory alone. The Tartar  
Emetic is more Powerful than the Ipecac: and  
we have undoubted Experiments to confirm it.  
The learned & Ingenious D.<sup>r</sup> Baker made many  
Experiments with Tart: Emet: in the Dysentery  
& found it more Effectual than Ipecac: or any other  
Substance he used. The Vit: Cerat: Ant: has been  
considered as the best Preparation in the Dysentery  
but I much doubt whether the Preference is founded  
either in Reason or Experience. I own indeed that  
it is less soluble than other Preparations & there-  
fore may remain longer on the Stomach & prove  
more powerfully diaphoretic & purgative, but as



the Action of the Vit: Cerat: Ant: depends upon the Quantity of Acid it meets with in the Stomach its Effects must always be uncertain & doubtful, sometimes great at others trifling & imperceptible

I shall here repeat an Observation I have had Occasion repeatedly to make in the Course of these Lectures. That as the Action of all Metallics given in Substance must depend upon the Acid they meet with in the Stomach their Effects are always uncertain & doubtful, which is not the Case when they are given in a Saline State. From this we would conclude that the Tart: Emetic is more Effectual than the Vit: Cerat: Ant: but we are convinced it is the Case from accurate Experiments. As this in Dysentery has the Power of giving the Fluids a new Determination it will have the same Effect in other Cases, Diseases. It appears that the <sup>ovity</sup> Cerat: has been employed with great Advantage in Hemorrhages of the Uterus Here it is probable that other Preparations, & particularly Tart: Emet: may be given with much greater Advantage. And in this Case it does not act with expelling any morbid Matter but by restoring an equable —



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Circulation to every part of the Body & taking off  
the Spasm on the Surface. In Haemorrhages & Dysen-  
teries is much more effectual combined with Opium  
Since D.<sup>r</sup> Dover's Powder has been known which is  
a Composition of Ipecac. & Opium it has been an  
established Fact that Emetics combined with  
Opiats are more effectual sudorifics than either  
given alone & it appears that the Virtues of each  
are improved & heightened by the Combination.  
Opium combined with Antimonial Wine is one  
of the most effectual sudorifics we can employ  
The diaphoretic Virtues of Antimony have been  
confirmed by its usefulness in Febriles and  
Diseases of the Skin.

The Skin is subject to a variety of Disorders  
& so far from investigating the Causes of them we  
have not yet been able to give them all Names. It  
is scarce necessary to mention the Use of Antimony  
in all these Cases. Every Author & indeed every  
Practitioner places his chief Dependence on Antimo-  
ny. It is found that those Preparations are most  
serviceable that are most apt to purge vomit or  
prove diaphoretic. It operates by increasing the insen-



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sible Perspiration & by this accomplishes a Cure & by promoting a freer Circulation in the extreme Vessels, the depraved Fluids are expelled. For Diseases of this Kind Physicians generally employ such Preparations as have no Acid in their Composition, such as the *Regulus Medicinalis*, the *Hermines Mineral* & the *Sulphur Aurat: Ant:* with Calomel. In this the Antimony renders the Mercury more safe & the Mercury increases the diaphoretic Virtue of the Antimony. But tho' we thus have a very good Preparation of Antimony - all the Preparations combined with an Acid are more certain & effectual than those without though combined with Mercury or any other Substance. Undoubted Facts show that the *Vin: Emet:* the Butter of Antimony & *Tart: Emet:* all prove effectual we should therefore combine the Mercury with *Tart: Emet:* by which the Virtues of both are increased & we obtain a Medicine much more effectual in the *Lues Venerea* especially where there are Ulcers as it vomits, purges, sweats & promotes the discharge by Urine. As we find they have been used with Success in one of the most stubborn Diseases we must consider them as one of the



most capital Remedies in the Materia Medica & with which an attentive & judicious Physician may perform Wonders. When I use Tart. Emet. I dissolve from 5 to 6 Grains into 6, 8 or 10 Ounces of Water of which two Tablespoonsful are to be taken every 5 or 10 Minutes until a vomiting is produced. This is a most agreeable & powerful Emetic. By dissolving it in a large Quantity of Water we have intirely in our Management & we may excite Vomiting to any Degree we please. We need not be under any Apprehensions of bad Consequences from it. To Children we may give it with equal Safety - Children bear no Evacuation better than Vomiting. Nature probably for wise Purposes has indued them with very irritable Stomachs - if distended with even of the Mothers Milk they will be excited into Contraction & throw it up. There appears no Remedy better adapted to the Diseases of Children than Emetics & they will take them for several Days together without being reduced by them in the Manner that they are by Purgatives. While on this Subject I must recommend it to you to read



a Paper in the London Medical Essays which will afford you both Entertainment & Improvement. I have one Remark to make that the frequent Use of Emetics is attended with one Inconvenience & that not an inconsiderable one they certainly have a Tendency to weaken the Tone of the Stomach. Some Constitutions will not bear Tart: Emet: or any other Antimonial Preparation. This is particularly the Case with those Persons who are liable to Spasms in the Stomach & Intestines. In these therefore we should not advise Tart: Emet: but Specae: or some other gentle Emetic in its stead. We should next treat of some other Emetics but on those we shall have but few Remarks to make as they are all perfectly similar & what is said of one applies almost in every Respect to the Rest.



## Lecture 33.

Specuauanka is the produce of the Southern parts of America where it is considered by the Natives as infallible in the Cure of the Dysentery to which they are much subject. Specac. is quicker in its Operation than Tart. Emetic. The Dose is from  $\text{grs } 10$  to  $\text{xx}$  or more. You are however to observe that tho' small Doses will excite Vomiting they will not produce copious Evacuations nor emulge the Glands so completely as large Doses. You may divide 15 or 20  $\text{Grs}$  into 2 or 3 Parts - if the first dose does not operate in  $\frac{1}{4}$  of an hour we are to give the second & if this has no effect in 5 or 10 Minutes the third which will seldom fail. This Method is particularly proper for Children - for them we divide 3 or 6  $\text{Grs}$  in 2 or 3 equal Parts which are to be administered as above. By observing this method we seldom or never produce too much Vomiting or Straining & we always adapt the Dose to the Strength of the Patient. Persons who are apt to strain much in Vo-



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miting should have a Bandage tied tight round  
the Abdomen this supports the Abdominal  
Muscles & prevents the violent Straining. No  
Drink should be taken immediately after an  
Emetic but it should be taken immediately  
after every Evacuation - it is thus kept con-  
ger in the Stomach & more effectually di-  
lates the viscid Matters contained there  
Large & seldom repeated Potations are prefer-  
able to small & frequently repeated Draughts  
Camomile Tea is preferable to warm Water  
especially in weak persons - it will increase  
the Evacuation by Stool & does not relax the  
Stomach so much as warm Water. In putrid  
diseases it is highly proper as it will prove  
serviceable as an Antiseptic. Where there  
is too much Acid it will by its Bitterness  
correct it. It is not necessary for Infants to  
drink much as they abound with Humors  
& this is the Reason that they vomit more  
easily than Adults.

Emetics are given to prevent Diseases from com-  
ming on, as the Scarlatina, Putrid & Malignant.



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ial Fevers In the Beginning of every fever  
that is not attended with Topical Inflammation  
I give in those if there is a Nausea with a  
Giddiness of the Head. In robust plethoric  
Constitutions it will be best to premise Bleed-  
ing before giving a Vomit.

2<sup>dly</sup> They are given during the Eruptive fever  
in the Small Pox & Measles. Here Emetics  
lessen the fever without weakening the patient  
so much as Purgatives. Of their Use in putrid  
Diseases we shall treat on a future Occasion.

3<sup>dly</sup> They are used in Intermittents. Here  
they should be given immediately after the  
fit.

4<sup>thly</sup> They are recommended by the French  
Physicians in the Scurvy Apoplexy & Lethargy.

5<sup>thly</sup> When a Person has overeat himself or  
committed a Debauch in eating or drinking  
or has taken indigestible food occasioning  
Cruditie, Nausea, Oppression & Pain in  
the Stomach Headach & ~~Purgatives~~ Ortego  
Here speedy Relief is necessary - all Tight-  
ness from Cloths &c should be removed. The



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head should be laid high a vein should be opened a Vomit should be immediately administered or if this cannot be for allowed or there is not time a Vomiting must be excited by tickling & irritating the Uvula & Fauces - asrid & stimulating the Glisters are to be injected for the Disease is to be removed only by evacuating the Stomach & Bowels. Attacks of this kind often prove fatal when the patient is said to die of an Apoplexy & Physicians have often mistaken it for an Apoplexy but it may always be distinguished from that by the small low pulse the breathing being without snoring & the puffed up Stomach & its coming on when this Organ is distended with Aliments. —

6<sup>thly</sup> Vomits are useful when Children are subject to Worms & ~~are~~ <sup>are</sup> thrown into Convulsions. I have generally found them a Sovereign & infallible Remedy. It will sometimes throw up the Worms or if it has not this Effect it will at least obtain a Respite when we may give the proper Vermifuge Medicines.



132 7<sup>thly</sup> Emetics are also proper where Persons have swallowed Poisons. If these are of the Vegetable Kind & taken in Salads occasioning Pain, Purging & cold Sweats Vertigo &c we should immediately give from 20 to 30 Grains of Ipecac. let the Patient drink plentiful of warm Water - tickle & irritate the Uvula so as to produce copious & sudden Evacuation - the Patient may likewise drink plentifully of Water acidulated with good Wine Vinegar. When a Person has swallowed Arsenic he feels a Burning in his Stomach like Coals of Fire & the Mouth and Fauces are inflamed. In this Case Vomits are improper as they tend to increase the Inflammation. In this Case we must endeavour to envelope the Poison & to defend the Coats of the Stomach from its acrimony by ordering large Draughts of Water & Oil or melted Butter, Cream & Milk. By Draughts of this Kind we often promote the Discharge of the Poison. We endeavour to promote Vomiting by irritating the Uvula & Fauces After a Person has by these Means recovered from



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immediate Danger he should for some Time live  
altogether on Vegetable Broths Milk & Cream.

8<sup>thly</sup>. Vomits are likewise useful in the Asthma  
whether the Spasmodic, Chronic or Humoral —  
In the Spasmodic Asthma we give from 15 to 20℥.<sup>n</sup>  
of Ipecac: at a Dose. In the Chronic we give from  
2 to 5 every Morning. its good Effects are owing  
to its diaphoretic & Antispasmodic Virtues by  
which the Determination to the Lungs is taken  
off & the Perspiration is increased.

9<sup>thly</sup>. Emetics have been used in Hemorrhages  
of the Uterus & Lungs. In the former they may  
produce good Effects by taking off Spasm &  
Irritation & determining the Fluids to the  
Surface. In Hemoptoe their Use is Ambiguous.  
D<sup>r</sup>. Bryan Robinson assures us that he always  
found them effectual in spitting of Blood, but pre-  
judice is so strong against them that I have never  
prescribed them, tho' persuaded in my own Opinion  
that they may occasionally be used with Advantage  
We know that Physicians of all Ages have pre-  
scribed long Sea Voyages to Persons subject to —



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Hæmoptoes & Consumptions without any Apprehensions of Danger from the Sea Sickness & Vomiting which is much more violent & lasts longer than the Vomiting produced by an Emetic. This may be used as an Argument in Favor of the Practice. I would recommend it to a young Practitioner not to oppose the Prejudices of his fellow Men, he will often have Occasion to say with the Mad. Medea.

— "Video meliora prologue  
Deteriora Sequor." —

Small Doses of Ipecac: may be given in Pleurisies & Peripneumonies to promote Expectoration. Vomits are improper in weakly Persons who cannot bear great Evacuations & Irritation. Vomits weaken much less than Purgatives as the Stomach only is evacuated, whereas Purges evacuate the whole Intestinal Canal. Vomits should not be given to Hysterical Women during the Paroxysm nor to Persons under violent Agitations of Mind. Robust, plethoric ~~Persons~~ Patients should be bled before they take an Emetic.



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We should not give a Vomit to Women during Menstruation nor to Women far advanced in their Pregnancy unless some particular Reason or some urgent Necessity requires it. Persons liable to Hernia should be very cautious about taking Emetics - they should at least apply a proper Bandage to prevent the Hernia from falling down. No Person subject to Apoplexy should ever take a Vomit if they can possibly avoid it. In Persons subject to Hemorrhages of Blood from the Stomach or laboring under Inflammation of the Stomach or Intestines Emetics are totally inadmissible.

Cathartics see Dr. Cullen's Materia Medica  
Diuretics, are such <sup>as increase the</sup> Medicines as discharge by Urine, they are used in Dropsical Cases we shall therefore premise a few Observations on the Nature of Dropsy which will enable us to judge of their Use.

The Proximate Cause of Dropsy has been imperfectly treated of by Authors of Repute - All the Proximate Causes may be referred under <sup>or</sup> two Heads. First Those that depend upon the State of the Fluids.



136<sup>2nd</sup> Those that depend upon the Solids or Vessels.  
Under the Proximate Cause depending on the  
State of the Fluids we rank first A Disposition  
of the Fluids (I mean their constituent Parts) to  
recede from each other from an increase of their  
watery Parts—

2<sup>nd</sup> A Disposition of the Parts of the Fluids to  
recede from each other without an increase of  
their watery Parts.

As to the Proximate Cause depending on ~~the~~  
The State of the Solids or Vessels depends—

1<sup>st</sup> On the State of the Exhalents—

2<sup>d</sup> Of the Absorbents

3<sup>d</sup> Of the Lymphatics

First as to the State of the Fluids the watery  
Parts or the Serum may be increased by a great  
Quantity of Water being taken into the Body—

2<sup>d</sup> By an imperfect Assimilation, 3<sup>d</sup> By an Ob-  
struction of the natural Evacuations. The first  
Cause it is easily conceived may take Place.

The 2<sup>d</sup> or imperfect Assimilation is owing to an  
Imperfection in the Digestive Organs. 3<sup>d</sup> The  
Watery Parts may be increased by a Suppression



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or Diminution of any natural Evacuation produced  
either by an Obstruction in the Secretory Organ or  
by some other Cause. Thus it is not uncommon for  
an Obstruction in the Urinary Passages to prove  
the Cause of Dropsy. Obstructed Perspiration  
may also be the Cause. It does not always follow  
that these Obstructions are the Cause of Dropsy  
for frequently the Suppression of the Secretions  
are the Effects of the Disease which is owing  
to some other Cause.

2<sup>nd</sup> The Fluids may be disposed to recede  
from each other (the Constituent Parts) This is  
most commonly observed to come on in Conse-  
quence of great Haemorrhages. There is not a  
more frequent Cause of Dropsy than this whe-  
ther the Haemorrhage is Spontaneous as the  
Menses, or morbid as they produce a general  
Weakness of the Solids. Independent of this Con-  
sideration these Haemorrhages by taking off  
a large Portion of Red Globules occasion a  
Separation of different parts in the extreme  
Vessels. Under this Head may be referred  
considerable & long continued Evacuations  
which take off the Serous Part by which the



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The System is weakened. And the Cause may be  
ranked under this Head where the Dropsy de-  
pends on a Rupture of a Lymphatic. Here  
tho' there is no Recession of the Fluids they  
are discharged & accumulated. Analogous to  
this is the Dropsy that depends on Hydatids  
where from any accidental Cause a small  
Blister is raised on the Surface of some Viscus  
which breaking pours out its Fluids & even  
from so slight a Cause an Ascites has been  
produced.

Of the Causes that depend on the State of  
the Solids. The 1<sup>st</sup> is from a Relaxation of the  
Exhalent Arteries. If the extreme Arteries  
are relaxed we can easily conceive that an  
increased Exhalation will follow. The difficulty  
lies in knowing the particular Instances when  
this takes Place.

But a more common Cause is any Obstruction  
to the Return of the Venous Blood. As these increase  
the Exhalation they come properly enough under this  
Head tho' they are produced by different Causes  
1<sup>st</sup> Compression by Ligature - Aneurisms -  
2<sup>d</sup> Polypæ in the Veins - These may occur in every



Part but are seldom observed to be the Cause of Dropsy except in the Beginning of the large Veins as the Vena Cava & Pulmonalis.

3<sup>d</sup>. An Affection of the Coats of the Veins - All topical Affections may impede the Return of the Venous Blood & be the Occasion of Dropsy. I once saw a fatal Dropsy occasioned by the Coats of the Jugular Vein being thickened.

4<sup>th</sup>. When any large & considerable Vein is inflamed especially those that are concerned in the Transmission of the Venous Blood in the Lungs. There are few Peripneumonies but what leave a considerable <sup>quantity of</sup> Water in the Thorax & when violent they are apt to terminate in Hydrops Pectoris. An Inflammation of the Liver may & often does occasion a Dropsy of the Abdomen.

5<sup>thly</sup>. A Schirrus of any considerable Viscus is more apt to produce a Dropsy. There is not ~~an~~ considerable Induration of the Lungs without a Dropsy of the Breast. When the Liver is Schirrous, the Stagnation of the Venous Blood produces an Ascites or Anasarca.

The same Thing happens when the Spleen is schirrous.

6<sup>thly</sup>. When the Veins are in a Plethoric, a Dropsy will take place - hence the most frequently Dropsies -



Occur in old than in young Persons. To this Head we may refer Obstructions of any usual Evacuations as of the Menses & Piles these may occasion Languor & Weakness in the Circulation. The Venous Blood is often prevented from returning by its own Gravity - This is the Foundation of the Oedematous Swellings in the lower Extremities which are always worse at Night.

Lastly Venous Obstructions may be owing to a Want of Powers producing Motions, or to a Palsy of the Veins themselves.

A diminished Absorption may be owing to a Fault in the Absorbent Vessels when they have lost their Tone. We sometimes observe sudden Cures to be performed by Spontaneous Evacuations & we sometimes relieve Dropsies by Vomits in 12 or 18 Hours. Here the Evacuation is not the sole Cause of the Cure but the Tone was at the same Time restored to the Absorbents.

Lastly Dropsy may be produced when considerable Obstructions are formed in the Lymphatics. This however is a rare Occurrence.



These are the different Causes of Dropsy & I think there is no Species but what may be referred under one or other of these Causes—

The Cure must be instituted according to the Cause. It would therefore be absurd to lay down any general Indications of Cure for a Disease that at different Times requires different & even opposite Methods of Treatment. Whether the Disease is owing to an Affection of the Fluids or Solids Diuretics are always indicated to give at least a Temporary Relief & to allow us Time for the Exhibition of more Effectual Remedies. But tho' they are always indicated they are seldom attended with the Effects for which we prescribe them. Even when we give the strongest Diuretics we can not be certain of their Operation; but if they do increase the discharge by Urine they always have a salutary Tendency. Purgatives & Emetics tho' they evacuate the Water more speedily, yet at the same Time by relaxing & weakening the System they contribute to a more copious Effusion. Diuretics are not attended with these Effects.



114 They are proper in every Species of Dropsy —  
The fixed Caustic Alkali is one of the stron-  
gest Diuretics when given in an Infusion of  
Wormwood or Chamomile Flowers for we  
find that Bitters increase the Diuretic Qua-  
lities. From  $\mathfrak{z}\mathfrak{j}$  to  $\mathfrak{z}\mathfrak{ss}$  of Sal: Tart: may be dis-  
solved in  $\mathfrak{z}$  viij of any bitter Infusion & a Tea-  
spoonful may be taken every two Hours. The  
Bitter likewise acts as a Tonic, contributes  
to strengthen the System & has a Tendency  
to prevent accumulation & resolve the Ob-  
struction in the Viscera

Analogous to the Caustic Alkali are  
the Ashes of Broom. When we use Ashes we  
should infuse them in Rhenish or Cyder to neu-  
tralize part of the Alkali. Of this the Patient  
may take a Wine Glass full at the Time & repeat  
the Dose occasionally until it produces the desired  
Effect. The Ashes of Broom have been supposed  
to possess some particular Virtues. They do not  
deserve a Preference & the Ashes of Hickory  
or of Oak which are the strongest of all as contain-  
ing most fixed Alkali will answer equally



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well & there are many Instances where they have proved effectual. All Emetics & Purgatives by boiling become Diuretic & I formerly mentioned that Tobacco acquired these Virtues by boiling.

Seneca Snake Root given in a large Dose vomits in a less it purges & in Decoction proves Diuretic diaphoretic & promotes Perspiration & Expectoration hence is used in Pleurisies and Peripneumonies & is likewise <sup>used</sup> in Dropsies - where it is found Effectual. —

It is not many Years since D<sup>r</sup> Stork introduced Colchicum into Medicine for the Cure of Dropsy. Before his Time it was considered as a Poison & indeed it is highly acrid & Poisonous & for this Reason ought to be employed as it is in this Respect on a footing with Squills when fresh - Unless it were highly acrid it would have little Effect in curing the Disease. It is usually given in Form of a Syrup. I have seen it tried in several Cases in which it proved to ~~have~~ <sup>have</sup> some Effect tho' I never saw it perform a perfect Cure. It does not always prove Diuretic & indeed it is but seldom that we can assure ourselves of any Medicine having this Effect.



143 Mustard. Horse Radish & the different Kinds of Cresses are the best in Scorbutic Disorders. They deserve the first place where the Arms & Leggs swell from Debility. They may be given in Substance Decoction or Infusion.

Mustard Whey ~~is~~ is one of the Substances to give a light Stimulus especially when there is a Paralytic Affection of the Muscular Fibres.

Within these few Years has been introduced into Medicine the Digitalis Purpurea or Foxglove which on many Occasions has been found to be a most effectual Diuretic. It is a Plant which grows spontaneously in England and several other Countries in Europe. It is not a Native of this Country, tho' it is cultivated in Gardens in & near this City. Dr. Withering has published a Treatise on this Plant & gives us a variety of Instances in which it proved successful in Dropsies & particularly in the Hydrothorax a Disease hitherto incurable. Its Use in this Disease has been confirmed by the Experienced & others & Dr. Smith of Birmingham informs me that it has been the Means of



saving the Lives of several laboring under this <sup>ill</sup> Disease. He also informed me that it had proved fatal before the proper Dose had been ascertained. You are to observe that it is an highly acrid and Poisonous Substance if taken in too large a Quantity as it acts most powerfully on the Urinary Passages. When too much is taken it affords an high degree of Nausea Vomiting & Purging which continue for several Days. These Symptoms may be relieved by Opiates. It has a peculiar Effect on the Heart. It has been known to diminish the Pulse to 35 <sup>in</sup> Minute & I have no Doubt but it may arrest the Action of the Heart altogether & there prove fatal. I have had an Opportunity of observing its Effects in several Cases in which it has been employed. The first was in a Boy of 14 Years who labored under a general Dropsy accompanied with an Affection of the Breast. I was consulted by two Physicians who by using Calomel & other powerful Remedies for a length of Time had relieved but not intirely cured him. He now took to Foxglove in Powder in the Quantity of 5 Grains



145 This operated so violently by Urine that it was found necessary to reduce it to half this Quantity. By the Use of this Medicine he was cured in a Short Time. The other was the Case of a Gentleman from the West Indies who came here for his Health. The Physicians there, supposed him to have a Collection of Water in his Chest. He was Oedematous all over his Body particu- larly his Legs; his Abdomen was distended & his Urine in small Quantity - his difficulty of Breathing was so great that it was necessary to give him 3 or 4 Grains of Opium to procure him Rest which was notwithstanding broken & disturbed. As every other Remedy had been tried but in vain the Foxglove was prescribed but with very little Expectation of Success. The first Dose was ten Grains produced remarkable Effects in the Urine & ~~Respiration~~<sup>R</sup> continuing it a Week he was ~~relieved~~ relieved of his Swelling. In some days his Abdomen again became distended in Consequence of his Viscera being obstructed & diseased. The Reason why he took ten Grains for a Dose was because the Plant was gathered



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late in the Fall when its Virtues were impaired by the Frost, otherwise you must observe that 5 Grains is a large Dose. The difficulty of Breathing has not returned since. It is very remarkable that the Medicine has been administered several Times since but has not had the same Effect on the Urine nor on the Swelling of his Abdomen. We have lately had Recourse to Mercurials which have been of some service most probably from solving in some Measure the Obstruction in the Viscera.

The Third Case is that of a Gentleman in Maryland in which I have been informed it has been attended with equally good Effects.

The Dose must be regulated by the Effects produced in the Stomach. In general 5℥. once or twice when the plant is in Perfection is a considerable Quantity 2℥. or 3℥. will produce the proper Effects. It will be proper for the Patient to drink of Toast & Water or some diluting drinks to determine it to the Kidneys. When the Swelling is removed a proper Course of Tonics & Chalybeates must be administered to prevent another Accumulation. Upon the whole



14 The digitalis may be considered as the most valuable Acquisition that has been made to the Materia Medica for many Years past. Its Use is not confined to Dropsies. It has been found useful in Mania &c. In Hemoptoe D<sup>r</sup> Withering has found it successful in several Cases & in many Instances it has proved a most powerful Antispasmodic.

## Lecture 34<sup>th</sup>.

### Epispastica

Hippocrates recommends the internal Use of Catharides but was unacquainted with their external Application. Aræteus Cappadox was the first that employed them as Vesicatories & he ordered the Patient to drink Milk for 3 Days before their Application to prevent Strangury. They did not come into Use till the XVII<sup>th</sup> Century when they were again revived in Italy & their Use from that Time became Universal.

From the Use of Epispastic Medicines the following direct Effects are produced. They excite Pain; increase the quantity of Fluids circulating in the Part to which they are applied; they produce



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a Discharge of Liquid in the Form of Serosity  
& they produce a Discharge of Pus. The changes  
produced in the System from the primary Effects  
of Epispastics are Attention to the Sensation  
of Pain excited by the Application of the Epis-  
~~pa~~ pastics. An Increase of Excitement in the  
Nervous Energy thro' the System in general.  
An uncommon determination of Blood to the  
Part particularly acted upon - a Diminution  
of the Quantity of Blood passing thro' the Blood  
Vessels in the Neighbouring Parts of those in  
which the flow of Blood is increased - a per-  
manent Change in the Mode of Circulation -  
a Diminution of the Quantity of the circulating  
Fluids & a particular Diminution of the Serous  
Part of the Blood.

The different Articles referred to the Class  
of Epispastics may be distributed into the three  
following Orders.

- 1<sup>st</sup> Epispastica Rubefacientia as Examples  
of which may be mentioned, Sinapi - Vol: Alkali.
  - 2<sup>nd</sup> Epispastica Vesicantia as Cantharides
  - 3<sup>d</sup> Epispastica Suppurantia as Issues & Setons
- The Indications which Epispastics are capable



149 of fulfilling may be derived from the three following Sources

1.<sup>st</sup> From their action on the Nervous Energy Hence they may be employed to diminish violent Pain - to take of the Effects of uncommon Sensibility - to remove Torpor.

2.<sup>nd</sup> From their altering the Balance of Circulation. Hence they may be employed to diminish the Impetus of the Blood against any Part morbidly affected - to diminish a morbid increase of ~~Affection~~ Action in Vessels in the Neighborhood of those to which they are applied.

3.<sup>rd</sup> From their producing Evacuation. Hence they may be employed to diminish the Quantity of circulating Fluids when too great for the State of the System at the Time - to evacuate morbid Accumulations of Serum -

These Indications may be illustrated and confirmed from Practical Observations concerning the Use of Epispastics in Cases of Tooth Ach - Hemorrhages, Apoplexia Ophthalmia - Hepatitis & Hydrocephalus -

The several Circumstances respecting the



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Choice of Orders in the Class of Epispastics may be deduced from the following Observations concerning each

1 *Epispastica Rubefacientia*. The Individuals referred to in this Order are ~~not~~ extensibly applicable to answer the purposes for which the Class may be employed. They are fitted to fulfill some Indications from an Action on the Nervous System. They are preferable to other Epispastics for the removal of Torpor when suddenly required. They may also be employed to fulfill Indications at changing the Mode of Circulation but they are rarely in this Intention preferable to the other Orders. From the Degree of Effect they produce, they are applicable chiefly to those Cases when slight & transitory Changes are wanted. The Constitutions to which they are principally adapted are dry spare Habits — those who would be hurt by any Degree of Circulation & those much debilitated by long continued Diseases.

*Epispastica Vesicantia*. The individuals belonging to this Order are from their Nature adapted for all the Indications to be answered by the Class.



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They are particularly preferable to all others, where Evacuation is suddenly wanted. From the Degree of Effect they produce they may be employed when the highest Changes are requisite. They will scarcely admit of being adapted to those Cases where very slight Changes only are proper. The Constitutions to which this Order are chiefly adapted are the serous & phlegmatic; those in the prime of Life & those affected with Acute Diseases.—

*Epispastica Suppurantia.* The Individuals referred to this Order are from their Nature adapted to fulfill those Indications which may be answered by a Change in the Determination of the Blood. They are frequently of remarkable Service for diminishing the Impetus of the Blood in parts morbidly affected. They may also be of Advantage to diminish a morbid Increase of Action in Neighbouring Vessels if a considerable Effect be not suddenly required. They may likewise for some Purposes to be answered by Evacuation. They are not adapted to diminish the Quantity



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of circulating Fluids - but they may be of Service  
for evacuating serous Accumulations & they  
are chiefly of Use for this Purpose, when these  
are deep seated or in their Nature such that  
they cannot be easily acted upon. The Constitu-  
tions to which they are adapted in preference  
to others are the Aged, the Irritable & those  
laboring under Chronic Complaints.

The Cautions to be observed in the Employ-  
ment of Epispastics as derived from their Nature,  
chiefly respect Pain which is occasioned by their  
Action especially when that has no Tendency  
to remove the Complaints against which they  
are used. The Inflammation they excite on the part  
to which they are applied And the Strangury  
which is a frequent Attendant of their Operation

The Conditions of the System which chiefly  
require Attention in their Employment are  
the Female Sex - & lax & Phlegmatic Habits.

The Circumstances chiefly to be observed  
with Regard to the Regimen necessary during  
the Exhibition of this Class respect - The accom-  
modation of the Diet & Temperature to the Disease  
of the Patient. The Use of Demulcents & diluents



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The Length of Time which the order of Vesicantias are to be employed. The Treatment of the part after they are removed. And the Continuance of Epistastica Suppurantia when employed. The different Individuals belonging to this class of Medicines are chiefly contraindicated by the Presence of the following morbid States. An high Degree of Irritability in the System in general, Morbid Supertitude of the Blood Or a general Inanition of the fluids.

We shall now speak of the use of Blisters in fevers. When fevers accompanied with Head Ach of a dull kind & Coma, Blisters are commonly useful. Blisters are also of Service in local Inflammations as in the Pleurisy after Bleeding - likewise in Peripneumony when the Pulse is first lowered by Bloodletting. The Effects of Blisters in continual fevers are doubtful while the Pulse continues full & strong but they are of use in their Decline & the Pulse sinks. From Dr. Lind's Account however it appears that Blisters are useful if applied 24 hours



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after the first Attack of an infectious fever,  
but a vomit must be previously exhibited. Blisters  
are very seldom of Service if neglected for the first  
two or 3 Days. If they are applied within the first  
24 Hours before the Spasm is formed, they may  
be of Service & prevent its Accession afterwards,  
they are not of Service. When there is a Subul-  
tus Tendonum & an increased Sensibility of  
the Nervous System, Blisters are of no Service  
even tho' the Pulse is low. They are useless when  
a Delirium comes on suddenly. Blisters are of  
most Service in dull phlegmatic Constitutions  
they are often of more Service in Children  
than in Adults. Children have Lax Solids &  
abound more in Serosity. Blisters lessen the  
Pain of an inflamed Part when applied near  
to it. They cure the Pleurisy by drawing the  
fluids from the Part affected & thus remo-  
ving the Obstruction. In Angina Pleurisy,  
& Hepatitis Blisters lower the Pulse more  
than repeated Bleeding; for tho' Canthari-  
des quicken the Pulse in Health it is not  
the case here. When Blisters lessen the



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Frequency of the Pulse it is a favorable Prognosis. If they do not we should not repeat their Application. We may also form some Judgment from the Appearance of the Serum for when it is yellow green & fetid it is a Sign the Disease is of a malignant Nature, when it is thick & like a Jelly it is a Sign the Blood is fitty - when the Blistered part remains pale & white it is a Sign of Debility & we should then administer Wine plentifully. Blisters on the Back are most difficult to heal as it is most troublesome to apply the proper Bandages to them & the Patient is liable to take Cold. A Blister to the Hand is least painful. In general we apply them to the Inside of the Legs or Thighs or in Pleurisies & Pneumonies to the Side. We generally suffer them to lay on 15 Hours except the Person is of a very delicate Habit. When applied to the Legs they may lay on 24 Hours. When to the Head they may be suffered to lay on 12 Hours or even 3 Days. A Strangury is apt to be



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excited by a Blister applied to the Head newly shaved, it should not therefore be applied until 10, 12 or even 18 Hours after this has been performed. We should be cautious how we apply Blisters to the Head when it is covered with red Pimples. Before the Application of the Blister we should cover the pimples with Adhesive Plaister. Blisters applied to the Legs or Back seldom excite a Strangury. To prevent a Strangury we should order our Patient to drink plentifully of an Emulsion of Gum Arabic in Barley, Milk & Water or other diluent Drinks. Camphor has been supposed to be a Corrector of Cantharides both when internally taken & externally applied; but to me it appears to be of no use. In delicate Women, Children & other irritable Habits we should apply a piece of Lawn or Muslin between the Epispastic & Skin. This will also be proper when we blister the Head as by these means we can bring off every particle of Cantharides. We seldom use Lawn when we apply Blisters to the Legs or Thighs except



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When there is a Delirium Epistaptics will raise  
Blisters even attho' an oiled Paper be inter-  
posed between them & the Skin Given this will  
not always prevent a Strangury. In the An-  
ginas Blisters applied externally to the Throat  
& as near as possible to the swelled part,  
scarce ever fail of affording Relief. In the An-  
ginas Inflammatoria Bleeding & Evacuati-  
ons should attend their Use with cooling Lax-  
atives & Clysters. Fomentations & Poultices  
as for Instance of Bread & Milk may be ap-  
plied externally. Goose Grease also rubbed ex-  
ternally has been found useful. This Disorder  
often requires a speedy Remedy for if the  
Swelling & Inflammation reach the Trachea  
it may soon suffocate the Patient. The  
Bastard Angina is seldom attended with  
Danger. The same Remedies are indicated  
in this Species. Gargles may be used with  
Advantage. They may be composed of  
Common Herb tea sweetned with Honey  
or Sugar or what will have a better Effect  
we may use fumigations of Vinegar & Water.



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In a Relaxation of the Uvula we may use Gargles composed of a Tinct. of Roses, *Essentia Cranat.* or a Solution of Alum will afford Relief.

In the Angina Gangrenosa we should apply Blisters externally to the Throat. By the Irritation they produce they invite the Humors from the internal to the external part. Here evacuations by bleeding & Purgings are improper. We should administer Cordial Antiseptic Medicines & Drinks such as Wine & Whisky & the other Preparations of Wine which generally act as Diaphoretics. The Infusion of Bark, the Acid of Vitriol much diluted Lemon Juice sweetened, are proper as Gargles.

Blisters are of Service in the Tooth Ach especially when it is of the Rheumatic kind. Here the Epispastics may be applied let into the Gums. If the Patient is Plethoric or if it is a pregnant Woman Bleeding is proper. If it is periodical & returns at a certain Hour of the Day resembling in this an Intermittent Bark is of Service. When the Tooth is carious & is not relieved by the Oil of Cloves it should be taken



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but. It is also necessary to extract the Tooth  
when the Membrane or Nerve is inflamed or  
tends to Suppuration which may be known  
by the fever, Violence & Duration of the Pain  
& Pulsation of the Artery at the Root of the  
Tooth. If the Tooth is not extracted there  
will be a fistulous Sore under the Chin  
with Pains in the Gums, Bars, Fauces & Head.

In all Eruptive Fevers where the Eruption  
suddenly disappears Blisters are useful. Where  
the Discharge from a Sore or Ulcer is suddenly  
checked nothing affords Relief so quickly as  
Erisiastics applied to the part before affected.  
Nothing affords Relief so soon when Rheuma-  
tic Pains fly from the Limbs & attack the  
Viscera than Blisters applied to the place  
that the Pain before occupied. In violent Co-  
lics the Spasm may be relieved by Bleed-  
ing, Fomentations, Glysters & the Applica-  
tion of a Blister to the Abdomen. In Af-  
fections of the Eyes or Ears Blisters seldom  
fail applied near the part. In the Sciatica  
Blisters are of singular Service. Hereby the Ap-  
plication of Ointments & spirituous Substances



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The Disorder is sometimes relieved but the Pain is thrown upon the Viscera & Bowels. Here a large Blister should be applied to the part first affected & repeated 3 or 4 times so that it should keep open. Blisters are the most effectual Remedy in a Retrogression of the Gout. If the patient is vigorous & plethoric & the Pulse full & strong we should first take away some Blood & then apply a Blister to the Ankle. When the part begins to inflame we should order him a Glass of generous Wine or a Bolus of Col. Alk. from 10 to 15 Grs. This determines the Gout to the feet or such a Derivation of the Humors to the Gout as prevents worse Consequences. In Persons subject to the Gout we must attend to the Time of the year in which they are commonly attacked with the Disorder for if at that Period they are seized with a Pleurisy or Grippe, Lethargy or Apoplexy we may impute it to the Gout & endeavor to derive it to the Extremities for if this is not done the common Remedies are of little Service. But if the Gout fixes in the Arm, Shoulder or Back it is attended with



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little danger I may be relieved by laying a Blister over the part affected. When the Lungs are loaded with Mucus Blisters afford Relief. Blisters applied to the Sternum will afford Relief & be of Service in the Ptituitous Asthma & Catarrhus fenilis. They are also of Service in the Colica Pictonum. They often afford Relief in Colics of the Nervous & Spasmodic Kind.

Blisters are of use in Spasms in general. They seldom fail of giving Relief in Hemorrhages of the Uterus & Vomiting of Blood. They excite an Irritation in the Part to which they are applied drive the Blood thither & thus take off the Determination to the internal Part. In paralytic Affections they are useful from their Stimulus by which they occasion an Afflux of Humors into the Part. As Suppressions of Urine & an Incapacity of retaining are frequently owing to the same Cause. When there is a Paralysis of the Bladder it is impossible to the Action of Stimuli hence a Suppression of Urine takes place. When the Neck of the Bladder labors under a Paralysis it will not



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contract hence a constant Stillicidium or Drib-  
bling of Urine takes place. And as they are both  
owing to the same Cause so they may be both  
cured by a large Blister to the Sacrum or Pe-  
rinæum. Children & frequently grown Persons  
are afflicted with a Palsy of the Bladder &  
Incapacity of retaining their Urine from some  
Injury done to this Organ or from some Ve-  
neral Infection settling there. Blisters to  
the Perinæum is the Remedy in both Cases.

Blisters are likewise of Service in the Apo-  
plexy. This is of two Species - Sanguineous & Se-  
rous. In the Serosus the Lips are pale, the  
Pulse small & Low & the Extremities cold  
In the Sanguineous the Reverse takes place,  
In both the patient falls down suddenly, the  
Pulse & Breathing only remain he being de-  
prived both of Sense & Motion. Some are tor-  
tured with Vomiting. Tho' the Attack is sudden  
it may sometimes be foretold for several  
Weeks before Hand by the following Signs.  
A Heaviness of the Head, a Decay of Strength  
the Tongue loses its Volubility, there is an  
Impediment in the Speech, the voice falters



<sup>frisks</sup>  
 The Memory ~~affairs~~ the Countenance changes  
 & there is a giddiness & Pain in y<sup>e</sup> head. In  
 the Sanguineous Apoplexy all Stimulants are  
 improper, our Aim must be to diminish  
 the Quantity of blood in the Brain. If an  
 Effusion has already taken place our Inten-  
 tion must be to increase the Absorption.  
 To diminish the quantity of blood in the  
 Head or to increase the Absorption we  
 must order large Bleeding by the Jugular  
 Vein or Temporal Artery which must  
 be repeated till the pulse sinks, Respiration  
 becomes easier, the face pale & the Swelling  
 of the Neck subsides. We may apply Cup-  
 ping Glasses or Leeches behind the Ears.  
 If the Person has been subject to the piles &  
 those are suppressed we may apply Leeches  
 to the Hemorrhoidal Vessels & should or-  
 der Glysters of Water, Oil, Sugar & Salt & as  
 soon as the patient can swallow, laxative  
 Medicines. The Head should lay high & the  
 feet should be in a depending situation so  
 as to cause a swelling of the Legs. All Tight-  
 nesses from collar, clothes, & Garters should



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be removed the Windows should be opened, by  
petition is necessary we should reduce the  
Strength of the Patient as soon as possible &  
keep it rather below Par. After the Paroxysm  
has gone off a Fever generally follows,  
which is to be moderated by keeping the bow-  
els open & the Body cool & upon the least  
Appearance of any Return of the Disorder  
we must have Recourse to Bleeding &  
Laxatives. The Patient must be very sparing  
in his Diet should use no hot spicy food  
Spirits, Wine or Coffee he should live chiefly  
on Vegetables & should frequently take  
small Doses of Crem. Tart. He should use  
moderate Exercise but not in boisterous  
or bad Weather. He should never in Sum-  
mer Time expose himself to the Rays of  
the Sun but should always use an Um-  
brella, should avoid Smoke should never  
sleep directly after Dinner, should keep his  
head cool nor never speak loud at a time  
nor loud; he must not attempt to lift a  
great weight nor stoop often. As soon as a  
Redness appears in his face or his Neck



Cloths begin to feel tight he should loose some  
 Blood & take some gentle Laxative. If he is  
 subject to the piles & these are suppressed he  
 must not take Astringents to recall them.  
 but may apply Leeches to the Hemorrhoidal  
 Vessels. In the Strains the Head should be  
 laid high & the Person placed as in the  
 Sanguineous. We may order Bleeding as a  
 Temporary Relief. Sugar moistened with  
 Lavend. Comp. may be put under the Tongue  
 Stimulating Glysters of Salt may be adminis-  
 tered. Blisters may be applied to the Back  
 & Legs. The fever that occurs after the Parox-  
 ysm is to be treated in the same manner  
 as in the former Case & the same Regimen  
 may be observed to prevent its Return.  
 We may exhibit some Drops of a Vol. Spt.  
 to raise the Spirits & increase Absorption

We are next to treat of  
 Anthelmintics

These are such Medicines as destroy Worms  
 in the Human Body. Tho' Worms are ne



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Disease themselves yet they are the Cause  
of many & various Diseases in the System they  
are always an Object deserving attention as  
they not only increase & multiply but share  
the Aliment introduced into the Body &  
thus deprive it of its usual & proper Now-  
rishment.

The Manner in which Worms are generated in  
the Body has afforded Matter for various  
Speculations & Disputes. It is a common &  
vulgar Opinion that Worms & other Insects  
are generated by putridity & filth. They hold  
the same Opinion with regard to the gener-  
ation of Worms within the Body. But  
sound Philosophy rejects this Idea even  
the most insignificant Insect was formed  
by the same Laws of Nature with the  
Whale or the Elephant. It is probable that  
we take in their Eggs with our Drinks &  
Aliment & what renders this Opinion the  
more certain is that the same Species of  
Worm is found in Fish & in some Waters



Not  
as is found in the Human Body. It is a well  
established fact that boiling water does not  
always kill Worms or their Eggs & it is  
therefore no Wonder that Complaints arising  
from Worms are so common since we may  
every Day take in the Eggs of worms many  
thousands perhaps in a single Glass of water.  
It may perhaps be inquired what is the  
Reason that every Person is not subject to  
them. This is owing to the different Habits  
Strength & Constitution of People. Persons  
of weak & relaxed Habits are apt to be  
affected with Worms while those of a  
robust Constitution & good Digestion  
are seldom troubled with them. Women  
& weakly Children with persons who lead  
a Sedentary Life are most liable to  
Worms. —

The Human Species are particularly subject  
to four Different Kinds of Worms —  
1<sup>st</sup> The Ascarides which are small white, pointed at  
both Ends like the Magots in Cheeses. They are chiefly



seated in the Rectum - they are quick in their Motion & occasion an Itching in the Anus.

2<sup>d</sup> The Lumbrici are round & resemble the common Earth Worm in Make & Shape by are almost white they are generally 4 or 5 Inches long & they occur in considerable Numbers.

3<sup>d</sup> The ~~Tania~~ Tania or Tape Worm so called from their being flat & resembling Tape. They are of a great Length & consist of a Number of Articulations When these Articulations are separated they are called Vermes Cucurbitini or Gourd Worms. Each Articulation has Life & the Power of procreating. It is scarce credible to what Lengths these Worms will grow & extend themselves. Instances have been recorded where they were near 100 Yards long. They are in common from 10 to 100 feet long. As every Articulation is a perfect Worm it is extremely difficult to expell it if of any considerable Size; for if but one Articulation remains it will grow to a great Size.

4<sup>th</sup> The Ascarus Lumbricoides. These are the common round Worm pointed at both Ends.

Exclusively of these four Species no Doubt



Others occur but as these are uncommon Cases & scarce ever distinguishable by Symptoms we shall not spend our Time in treating of them.

The Diseases occasioned by Worms are various & Numberless. 1.<sup>st</sup> They share the Aliment taken into the Body. Hence the ravenous Appetite & uneasiness of those afflicted with them when without Food.

2.<sup>nd</sup> They frequently form a Nidus which extends the Intestines in some Parts & occasions Contractions in others. This is the Cause of Flatulencies Colics & it has been known to occasion the Iliac Passion—

3.<sup>rd</sup> The Filth they generate putrefies in the Intestines & occasions Diarrhoeas Dysenteries & even Fevers of the Malignant Kind.

4.<sup>th</sup> They penetrate thro' the Intestines into the Abdomen according to Instances given by Dr. Haller.

5.<sup>th</sup> By the Motion & ~~Locu~~<sup>Locu</sup>tion in the Bowels they produce various Disorders—They move from one part to an other to procure Food or avoid



what is hurtful to them.

They are injured by Salt - Smoked Meat  
spirituous Liquors, Anniseed, Sugar & other sweet  
Substances. By their Motion they irritate the inner  
Coat of the Stomach & Intestines & produce Spasms  
& Colics, Distensions of the Abdomen, Nausea vomiting  
Gripings & Diarrhæas & at other Times Constiveness  
with a Number of other Complaints in the Bowels  
& from the Connection & Symp<sup>ty</sup> which subsists  
between the different Parts & sometimes the whole  
Body they affect it in the most surprising Man-  
ner. They produce thus a suppression of Urine  
Palpitations of the <sup>ye</sup> Heart, a difficulty of Swallowing  
Loss of Sight, Singing in the Ears an Impediment  
in the Voice & sometimes a total Loss of it -  
Hiccough, Dizziness, Convulsions Epilepsy and  
even Apoplexy - It is therefore said with Justice  
that no Disease is so extraordinary ~~but~~ what it  
may be occasioned by Worms - And indeed if a  
Patient is afflicted with any uncommon Disease  
the first Question we are to ask is whether at any  
Time he has been troubled with Worms -

In the next place we are ~~consider~~ to inquire.



W<sup>h</sup> into the Symptoms in general by which we may know whether Worms are present or not & afterwards the particular Signs by which we may discover under what particular Species the Patient labours <sup>was</sup> ~~was~~

The Symptoms by which we judge whether Worms are present are an unhealthy & sickly Colour of the Face & Countenance, a frequent Change of Colour from pale to red a blue Ring under the Eyes - an Itching of the Nose, frequent Head Aches which come on especially after Meals a quantity of watery Saliva in the Mouth upon waking in the Morning, a grinding or gnashing of the Teeth during Sleep, an Inclination to lay upon the Stomach, the Patient is frequently found sitting up right in Bed during Sleep a Motion & Noise is perceived in the Mouth during Sleep, a Thirst in the Morning on waking a Noise in the Ears, sometimes an Aversion to Meat but generally a voracious Appetite; foetid Breath, frequent Fainting, Vomiting,



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Dizziness, difficulty of Breathing, Pains in  
the Belly; the Belly swells, there is a rumbling  
Noise in the Abdomen with a Suction & Motion  
which the Patient perceives, tho' he cannot describe  
it; sometimes a Diarrhoea, sometimes Costive-  
ness, & tho' the Patient takes much Nourishment  
he cannot thrive & they are worse in the  
Morning if they have taken no Supper the  
Night before. They are worse about the New  
& Wane of the Moon, they are often sensible  
of an Irritation in the Rectum which frequently  
occasions Faintings. They are often troubled with  
a Tenesmus - They are incapable of attending  
to Business, tho' they are at a Loss to tell what  
ails them. At Times they cannot speak plain;  
some become delirious, some are affected with  
Convulsions without any apparent Cause and  
if these are but slight - There is no Appearance  
of Froth in the Mouth - Some become rigid  
without Sensation or Motion - They fall into a  
Sleep & awake perfectly sensible & complain of  
nothing but Weakness. They recover slowly  
from any Disease & they are frequently troubled



with Palpitations of the Heart. It is not however to be supposed that all these Symptoms occur in the same Person. It is sufficient to denote the Presence of Worms therefore if some ~~are~~ or many of these Symptoms occur in the same Person. I was therefore right in my Judgment when I concluded that a Girl 10 Years of Age had Worms because she eat a great deal & still continued lean & was worse about the Wane of the Moon. Another Child wasted away without any apparent Cause & did not complain of any Thing in particular & had no other Symptom of Worms than that it was always found laying upon its Belly or Stomach in the Morning which is the most certain Sign of the Presence of Worms. By a few Doses of Calomel a small Tape Worm came away. After we are once sure that Worms are present we ought next to inquire with what particular Species the Patient is afflicted -

The Tape Worm occasions a Scurction in the Abdomen & the Patient perceives<sup>as</sup> if something alive within him was rolling along & frequently voids by



Stool Vermes Cucurbitini

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The Presence of the Round Worm is Known  
by a Pain & griping in the Umbilical Region  
The Ascarides occasion an Irritation in the  
Rectum & <sup>last</sup> Tenesmus —

### Lecture 35th.

Having thus enumerated the different Species of Worms & the Symptoms by which they may be distinguished from each other we are next to say something on the Remedies that expell or destroy them these are termed Anthelmintics which are of two Kinds. —

1<sup>st</sup> Such as by their immediate Action upon Worms destroy them as in the Manner of Poisons.

2<sup>d</sup> Such as act immediately that is by rendering their Place of Abode so disagreeable as to induce them to quit it. —

Under the first Head we rank Bitters such as Rue, Wormwood & Wormseed. These are not so Effectual as has been supposed & seldom expell Worms unless combined with Mercury or some more powerful Vermifuge. Bitters however may ~~be~~ sometimes be of Service without Addition. I formerly



Told you that a Weakness of the Intestines pre-  
disposed to Worms. Bitters by restoring Tones  
& increasing the Peristaltic Motion may in some  
Cases expell them. Bitters should be always given  
after Worms are expelled to prevent their Regene-  
ration. Purgatives may also be employed to expell  
Worms. These act in a double Intention —

1<sup>st</sup> By giving a Stimulus to the Intestines they  
occasion a griping & Spasm by which the Worms  
may be carried out of the Body. 2<sup>d</sup> By taking  
away the Nourishment from the Worms, they  
weaken them so that they cannot keep their  
Hold & <sup>are</sup> carried off —

It is better to administer Purges after some  
Medicine has been given to destroy Worms and  
we should in this Case employ those of the acrid  
Stimulating Kind. Jalap Scammony & Calomel,  
Aloe, Rhubarb & Senna are not adequate to  
the Purpose. This proves that Bitters are not  
~~adequate to expell Worms~~ have no immediate  
Effect on Worms —



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We shall next consider such Medicines ~~which~~ as seem to have a peculiar Virtue in destroying Worms. These are divided into Minerals & Vegetables - And first of the

Mineral The weakest of these are the Saline Substances - These are divided into Acids, Alkalis, & Neutral Salts - These do not Kill Worms quickly unless applied in a concentrated State which is hardly possible if given by the Mouth. They are so diluted in the Stomach that they retain very little of their Saline Stimulus - when they arrive at the place of the Worms. I have frequently however relieved Children afflicted with Worms by the Use of Domestic Medicines which is common Salt a Tea Spoonful mixed with Molasses I have often found it as effectual as any other Mode given every Morning or oftener according to its Effect.

Sulphur especially joined with some Saline Substances as in Hepar Sulph: will destroy Worms There are some Mineral Waters which contain Hepar Sulph: which are effectual in destroying



17 Worms, such as those of Harrow Gate in York, shire. Sulphur is an Anthelmintic even without being mixed with Salts & is used in this Intention mixed with Molasses & Milk as a Domestic Medicine & you will frequently find it effectual. Gun Powder is a common Medicine against Worms amongst poor People - its Virtues depend on the Sulphur & Nitre it contains.

Ever since Mercury has been introduced into Medicine it has been looked upon as powerful in destroying Worms. It may be used in various Forms but Sulphur destroys its Effects. The principal Preparations are Calomel & Corrosive Sublimate & few are more effectual in destroying Worms. Calomel may either be given by itself or combined with other Substances as Purgative Medicines. Corrosive Sublimate in Pills with Opium in the Dose of  $\frac{1}{8}$  or  $\frac{1}{4}$  of a Grain is one of the most Powerful Vermifuges but is not to be trifled with - It is improper for Children. Calomel may be given in Doses from 3 to 5 Grains



repeated every second or third day

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Tin has been recommended as a Vermifuge, but always in Powder. It is imagined by every Physician almost that it acts mechanically by its weight pricking & irritating the Worms. But it does not act altogether in this way. Tin is dissolved by the Acid in the Stomach & acts on the Worms as a Poison. From Margraaf's Experiment it appears that all Tin contains Arsenic & it is probable that from this Circumstance it may have some Effect in destroying Worms.

Iron & the various Preparations of it have been recommended against Worms & it has this Advantage over other Remedies that it arrives at the Intestines unchanged. Boerhaave dissolved  $\mathfrak{z}\text{i}$  of Copperas in  $\mathfrak{l}\text{ij}$  of Water & gave this Quantity - This Medicine at the same Time gives a proper Tone to the Stomach & Intestines. In my own Practice I trust chiefly to the Preparations of Iron & am very seldom disappointed. You may mix the Sal Martis with prepared Steel & you will find it an effectual Remedy.



179 By continuing it a sufficient Length of Time.

A great Variety of Vegetables Kill Worms out of the Body. All fatid Plants & all such as are accompanied Alliacous Smell destroy Worms. It is said that Garlic applied externally to the Soles of the Feet will expell Worms. Asa fetida is frequently used with Success. A Clove of Garlic warmed in Ashes may be swallowed whole every Morning fasting.

Carolina Pink Root, Bearsfoot & Spigelia Anthelmia are also powerful Vermifuges. Dr. Lining of C. T. <sup>now</sup> South Carolina was I believe the first that introduced Pink Root into Practice. I have seen it often tried & it was generally as successful as almost any other Remedy. If given in too large a Dose it occasions Vertigo. It may be given either in Powder or Infusion. It has scarcely any Taste & by adding Milk & Sugar to it Children may be so deceived as to drink it for Tea. The Dose in Substance is ℥.ss x ij —  
Bears Foot is a Plant that grows maturely



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in Maryland Virginia & other Southern States &  
is cultivated in Gardens about this City. This is per-  
haps one of the most powerful Vermifuges. Doctor  
Witt of Germantown was the first that used it near  
this City & its Effects rendered his Powder celebrated  
As it is very powerfull it should be used in small  
Doses as 2 or 3 grains in a Dose for a Child of 2. or 3 years <sup>old</sup>.

*Spigelia Anthelmia* grows in the West Indies  
We were first made acquainted with its Virtues  
by D<sup>r</sup> Brown in his Natural History of Jamaica  
He tells us that this Medicine has been in Use a  
long Time - that among the Negroes & Indians  
it is called Worm Grass. He says that it is ~~as~~ <sup>as</sup>  
effectual against Worms as the Bark is against  
Intermittents. They boil two handful of the fresh  
Herb in a quart of Water until one half is consumed  
They give a quarter of the Quart at once to a grown Person.  
It is best to give half this Quantity & repeat every 4 or  
6 Hours. If the Person is a Child the Dose should be  
still less & the Interval longer as 12 Hours. It promotes  
Sleep with as much certainty as Opium & when they  
awake the Eyes appear distended sparkling or shining



184<sup>th</sup>  
Soon after the first Dose the Pulse becomes regular the Convulsions if there are any are removed & the Worms come away in large Quantities sometimes without any Purgatives being administered. It is very seldom that more but one Dose is required. Dr. Brown says he has often succeeded with it when there was scarce Reason to believe that the Patient could be saved by any other Means —

A Decoction of the unripe Shells of our common Walnut are said to prove Vermifuge. I have had no Opportunity of trying them but I have Reason to believe that they will have this Effect as they kill Worms out of the Body.

Cow Itch grows in Pods in the Form of small setaceous Points. Its Operation on the Worms is mechanical. By its sharp points it irritates the worms & thus makes their Habitation uncomfortable to them. It commonly administered in Substance in Syrup or Molasses. Horse hairs cut fine act upon the same Principles & may be administered with equal Success —



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The Bark of the Cabbage Tree in the West Indies is looked upon to be a very powerful Vermifuge. It is as powerful as most others.

Oil of Olives or expressed Oils have been recommended to Kill Worms. It has been thought to act by stopping up the Foramina thro' which they were supposed to breathe like Insects; but this is not ascertained & on the contrary they live in Water & die in Air.

We shall next treat of the Method of Cure that the ~~several~~ <sup>parasitic</sup> species require.

The Ascarides as I have already said chiefly infest the Rectum. Saline & all sweet Substances Kill Worms effectually, Glisters therefore of Milk, Salt & Sugar will often destroy Ascarides without any other Medicine. Gentle Laxatives will also destroy them. Nothing is more effectual than Glisters & Quicksilver Killed as it is called with Hogslard.

The Lumbrici or round Worms are not so easily expelled as the former. The Medicine for expelling these Worms should be given about Breakfast Time & if it is given in Milk, the Worms will be more



183. greedy for it. The Patient should not prepare  
the Potion himself. This is the Opinion of some  
Physicians, but I am not sure it is not well founded  
however it is better to attend to it. If the Patient soon  
after taking the Medicine is sensible of great pain  
it is probable that the Worms are endeavouring to  
penetrate thro' the Intestines into the Abdomen  
& the best Application is to rub the Belly with  
Petroleum. It is necessary that the Patient should  
abstain from a Milk Diet & live upon salted  
Meat sometime before taking the<sup>se</sup> Medicines.  
He may also take a piece of salted Herring at  
Night going to Bed without taking any Thing  
after it. As they do not like this Kind of Food  
they may be dislodged with more Ease than if  
this Method is not pursued. When there is Reason  
to believe that all the Worms have been expelled,  
Bitters may be given as Tonics to prevent their  
Regeneration. The Tincture of Rhubarb is better  
than any other Remedy. Where Worms are attended  
with Fever we must use such Remedies as will



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destroy the Worms & will at the same Time moderate the Fever such as Camphor & Vinegar. We may take ʒj Camphor reduced into a fine Powder by Means of Sp<sup>t</sup>: Vin: Sugar ʒij & good Wine Vinegar ʒviij or ʒx & give one or two Table Spoonfulls every 2 or 3 Hours.

The Tania or Tape Worm is expelled with more difficulty than any other as it is of great length & has the Power of fastening itself on the Intestines by means of its sucking Tubes & will sometimes elude the Power of Medicine. D<sup>r</sup> Rosen a celebrated Physician in Sweden ordered his Patients afflicted with this Worm to live for some Weeks on salted Meat before he administered any Medicines to expell them it - he then prescribed some Medicines which I have already mentioned & when he thought that the Worm had gotten lower down in the Abdomen he administered a smart Purge of Jalap & Calomel & ordered his Patient to drink plentifully of Cold Water. You are to observe that Cold Water will deprive the Worms of all Sense & Power of Motion. I have known that this Method succeeded several Times & have seen a Tape Worm 30 & 40 Feet long -



105 brought away in this Manner. D.<sup>r</sup> Hapfelquist in his Travels to the East tells us that the Inhabitants of Grand Cairo <sup>are</sup> very much afflicted with the Tape Worm & that to expell it they take Petroleum & if the Worm does not come away at the first Dose they repeat it & are seldom disappointed in their Hopes of a Cure. In my own Practice in every Species of Worm except the Ascarides, I seldom use any other Medicine than the Chalyb: Spt. with Sal. Martis & I use the Chalybes in much larger Doses than it is commonly employed. I frequently exhibit it to grown People in the Dose of ℥ss or ʒj twice a Day & ℥.iij or ℥.v of Sal. Martis may be combined with each Dose.

Antizeumica or Antiseptica: There are few or none of the Substances comprehended under this Title but we have already treated of previous to this; we shall therefore premise somewhat on the Generation of Putrid Diseases —

All Putrid acute Diseases so much resemble one another & require so similar Methods of Treatment that what is said of one applies to all



the others making Allowance of the difference of Parts which they occupy, for the variety of Constitutions & Circumstances of Life. There is a great variety of putrid Diseases, a bare Enumeration of their Names will be sufficient. The Febris Putrida Biliosa, Synochus Putride, Triteaphia. Hamatritica, Amphemerina Leipyria Febris Syncopalis, Clodes Dysenteria, Epiola Setcrodes, Typhus, Febris Maligna & Petechialis, & the Angina Gangrenosa. They are all owing to a similar Cause. The same Cause that in one Person occasions a Bilious Putrid Fever will in another produce a Sore Throat & in a third a Dysentery. In all these Cases both Fluids & Solids are affected & have a Tendency towards Putrefaction. We shall first enumerate the Occasional Causes & from thence deduce the Proximate Causes.

We before observed that the Fluids of our Body have a constant & natural Tendency towards Putrefaction which is prevented from going to excess by the Acescent Aliment we take in. If a Person is deprived of all Nourishment he will die of a putrid Disorder. This we see in the Cities and



187<sup>th</sup> Fortresses where the Inhabitants are besieged & want the necessaries of Life, the Plague or some Putrid Disorder is the Consequence. This ceases when the Siege is raised & the Inhabitants are supplied with fresh Food. Persons who live on Animal Food are very subject to Putrid Disorders. This is illustrated by the Plague in Turkey which is related in the Philosophical Transactions where it is observed that the Americans are least of all subject to this Disorder. These People eat little Meat, they make great Use of Onions, Leeks and Garlic & even drink Wine. That the Humors are more or less putrescent according to the Aliment taken in is proved from the Experiments which Dr. Young made upon the Milk of a Bitch. When he fed her on Meat her Milk was Alkaliscent when he left this off a few days & fed her on vegetables her Milk was aciscent.

Impure & corrupt Food is another Occasional Cause. Vandermeir tells us that during the Siege of Breda the Inhabitants were necessitated to live upon very impure & bad Food the



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Consequence of which was that they were seized with the Plague while the Besiegers who had plenty of wholesome Food continued intirely free from the Disease. Persons of a strong Habit in whom the functions are performed with Vigor are more liable to these Diseases than Persons of weak & lax Habits of Body. It is an undoubted fact that if a young healthy & strong person goes from North America to the West Indies with his Blood dense & rich & his Fibres highly braced, he will be more liable to the yellow fever prevalent in those parts than one of a weak & relaxed Habit. Violent Exercise, hot spicy food, stimulating medicines Rum & Spirits all tend to produce these Diseases, not because they are septic for Experience demonstrates that they oppose Putrefaction, but because they stimulate the Solids & increase the Impetus of the Fluids. Heat & long Exposure of the Rays of the Sun tend to produce these Diseases. All these operate as Remote Causes & eventually disposes to these Diseases. But there is something



more necessary to act as an exciting Cause of the Disease for if the Secretions & Excretions are kept up the Person remains in tolerable Health but as soon as the perspiration is checked or suppressed a putrid Disease comes on. It therefore happens that whatever check the Perspiration is the exciting Cause of the Disease. When Persons in a warm bed are exposed to Cold they will suffer from the Perspiration being suddenly checked while the Body is heated. Seals after a hot Day will also check the Perspiration. For this Reason the Autumn turns with Diseases particularly to those who in the Morning chill, cloth themselves for the hot Sun of Noon. Particular Affections of the Mind as grief & Sadness tend to check Perspiration. Hence Dr Lind tells us that fear alone would produce a malignant Disorder. long continued Watchings also have this Effect. But all these are nothing in Comparison with a warm moist Air abounding with putrid Exhalations. A warm moist Air without putrid Exhalations will produce Intermitting rather Disorders not



of the putrid kind This is very prettily illustrated by Pringle. He tells us that the English Soldiers encamped in Ireland exposed to noxious vapors from Lakes were very sickly while the Sailors on Board the Mercury at Anchor at a Distance from Shore out of the reach of the noxious vapours continued perfectly healthy. Dr Lind gives similar Instances in his papers on fevers & Infections. Larcenius tells us that that part of Rome which is exposed to the southerly Wind blowing over Ponds & Morasses is subject to putrid Diseases from which the other part remains perfectly free. This is so well known that no Person travelling to or from Rome on that side of it will sleep within 20 Miles of it. It is said that the late Lord Baltimore neglected this Caution & in consequence of it was seized with a putrid fever of which he died. Dr Lind tells us that Sailors are healthier at sea than in Harbors. It is said that the higher the Ships advance up the Rivers on the coasts of Africa the more



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Sickly the Sailors become while those out at Sea  
or in the Mouth of large Rivers are perfectly  
healthy. From hence it appears that it is not  
Heat & Moisture alone but it is necessary  
that putrid Exhalations be combined in order  
to produce putrid Disorders. This is confirmed  
by the Observations of Physicians in all Ages  
even Galen observed that moist Air filled  
with Exhalations from Marshes produces  
Putrid Disorders. The Bodies of Men slain  
in Battle remaining unburied & the Car-  
casses of fish & Animals thrown upon &  
rotting on the Sea Shore, the Narrowness  
& Filth of Streets, putrifying Vegetables,  
Damaged Corn, People crowded & confined  
in Ships & Jails have all been the Occa-  
sion of putrid Disorders. Seneca illus-  
trates this. He tells us that a City in  
France was surrounded with a Ditch &  
the Inhabitants remained healthy by  
some means the Water in the Ditch failed.  
From the filth laying in the Bottom  
stinking Vapors were emitted. These soon



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produced a putrid Disorder which destroyed a  
great Number of the Inhabitants but upon  
again filling the Ditch with Water the Di-  
sease vanished entirely. Hapselquist tells us  
that during the Overflowing of the Nile the  
Inhabitants enjoyed perfect health but when  
the Waters subside the whole Country appears  
like one Morass filled with putrid Ani-  
mal & Vegetable Substances. From these  
the Air is soon replenished with putrid  
& noxious Exhalations producing the Dy-  
sentery & other putrid Disorders. You are to  
observe that while the Waters is at a certain Height  
above the Earth no Putrefaction can go on; but when it  
subsides to a Level with the Surface of the Earth  
putrid Exhalations arise. Philadelphia is in a  
Manner surrounded with Water & affords us as good  
an Instance as occur in any Part of the World and  
it is notwithstanding very Healthy. But a few Miles  
below the City this is not the Case; tho' even here the  
Inhabitants are tolerably healthy till Autumn  
when the Water in the Ditches & Ponds is evaporated



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Then putrid stinking exhalations arise from the  
Substances <sup>at</sup> the Bottom of them occasioning  
Fluxes & other Disorders of which the Inhabitants  
of the City have little Knowledge. It is a Fact  
that the People below the City remain tolerably  
healthy during the Spring Winter & greatest part  
of the Summer until the Waters evaporated  
from the Ditches & Ponds. The same I am told is  
the Case in the States to the Southward of this.  
From this it appears that it is not Humidity  
& Heat but putrid Exhalations which excite  
putrid Exhalations Disorders. This shows in  
what the Proximate Cause consists viz. A putrid  
Ferment taken into the Blood or generated in the  
Body producing a Change in the Fluids & Solids  
& converting them into its own Nature. This is  
the Opinion of Pringle, Huxham & every rational  
Writer since the Time of Hippocrates. All the  
secreted Fluids are of a putrid Nature & from all  
the Symptoms & Phenomena it appears that the  
Blood is also affected. The Blood breaks out  
in various Parts & is discharged from the Nose.



Angles of the Eyes &c. When taken from a Vein <sup>1794</sup>  
it does not conerete & appears thin & dissolved;  
livid purple Spots appear over the whole Frame  
& at the close of the Scene the Body appears all  
over a putrid Carcase—

There has been a Dispute with Respect to putrid  
Fever whether they are always Contagious or not.  
I think we may answer in the Negative & suppose  
they are only Contagious when a Person has been  
exposed to the same Occasional Causes. This is only  
Matter of Opinion, fortunately for us this Plan  
does not often <sup>give us</sup> an Opportunity to make Observations  
on this Matter & besides the Dispute is of such a  
Nature that any Person may satisfy himself by  
consulting Books. There <sup>are</sup> instances of Diseases  
in which the Fluids were converted into a putrid  
State & yet these Diseases were not Contagious  
the following illustrates this. In the Year 1763 an  
uncommon Disease appeared in the Island of  
Antigua which attacked only the Negroes & Cattle.  
At first destroying Oxen Sheep & Hogs it at length  
attacked the Negroes who perished by it in great  
Numbers, the white People remaining free except



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The Person who gives us this Account. This Gentleman was a Practitioner of Physic & he probably received this Disease from opening a Sheep that died with it. This Disease was evidently of a Putrid Nature. It appeared with Boils & Bubbles. It attacked only those Negroes who eat the Cattle that died of this Disorder. Here we have an Instance <sup>h</sup> where eating putrid Meat communicated the Disorder to the Person who eat it & it also shows that Contagion may act on the Fluids as well as the Solids & here the Fluids appear to have been primarily affected.

As all putrid Diseases are of a similar Nature & Origin they require nearly the same Method of Treatment. We should first by gentle Evacuants cleanse the Stomach & Bowels & then administer such Medicines as resist the Putrefactive Tendency & lastly restore & support the Strength of the System. Bleeding will do little or nothing towards a Cure except where the Patient is very Vigorous. When the Pulse is not hard & tense



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And when there is not an Inflammatory State of  
the System in the Beginning, the best Practitioners  
agree that large & repeated Bleeding by weak-  
ning the System will contribute to increase the  
Disorder & if it is ever proper it must be with  
the utmost Caution & Circumspection. Many  
Physicians give Emetics in putrid Disorders.  
Dr. Hillary observes that he seldom had occasion  
to administer Emetics as there is <sup>almost</sup> always a constant  
Nausea & Vomiting which may be sufficiently  
promoted by Draughts of Camomile Tea (and  
between whiles he gave the Acid of Vitriol to cor-  
rect Putrescence) - Stimulating Purges are improper  
the Bowels are kept open by an Infusion of Sa-  
marind or Prunes by cooling acidulated & refri-  
ging Drinks. The Patient should eat plentifully  
of ripe Fruits, drink Sherbit & other agreeably  
acidulated Drink. After the Stomach is thus  
cleansed if a Nausea Oppression & Anxiety remain  
they may be relieved by taking an Infusion of  
Mint in Claret at the same Time continuing  
the Use of the Elixir of Vitriol. We must always



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It also keep the Bowels open by lenient Glysters.  
We should by all Means guard against a Diarr<sup>h</sup>,  
hæa; if this occurs we should immediately  
check it by stewed Claret & Cinnamon or by  
an Infusion of roasted Oranges in Claret di-  
luted with Water. If these fail we are to make  
use of an Infusion of the Bark to which may  
be added some Tinctura of Saponica & Laudanum.

There has been a Dispute whether Blisters  
are proper in Putrid Disorders. Some are of  
Opinion that they are of no Use while others place  
great Confidence in them. When the Disease is con-  
fined to a particular part & are intirely local  
Blisters may be of Advantage. Thus in the  
Ungula Gangrenosa Blisters applied to the Neck  
will often produce great Effects by the Irritations  
which they occasion. They drive the Fluids to the  
external Parts, & thus relieve the Internal —  
They have been thought proper when the Strength  
of the Patient sinks & a Stimulus becomes ne-  
cessary, but I entertain great Doubts of their



Use In one Case they seemed to accelerate <sup>the</sup>  
Health of the Patient —

To fulfill the second Indication which is to  
resist Putrefaction we should persist in the  
Use of the Drinks & Medicines first mentioned.  
The Patient should take large Doses of the  
Elixir Vitriol & of the various vinous or watery  
Infusions of the Bark, if the Bark can not  
be given in Substance or occasions purging  
It should therefore be given in Decoction espe-  
cially with Wine. We should not limit the  
Quantity but the Patient should take as much  
as he possibly can. Wine Whey is of great impor-  
tance. it excites a Diarrhoea & removes the Pest,  
lesones. If a Delirium takes place the Head  
should be shaved & washed with Vinegar &  
Water. This should also be applied to the Hands  
Arms & Breast Neck & Feet. Podeluvia have  
saved many a Life. Dr Cullen says that he  
saved more lives by Fomentations than by any  
other Means. In the putrid Sore Throat. Dr

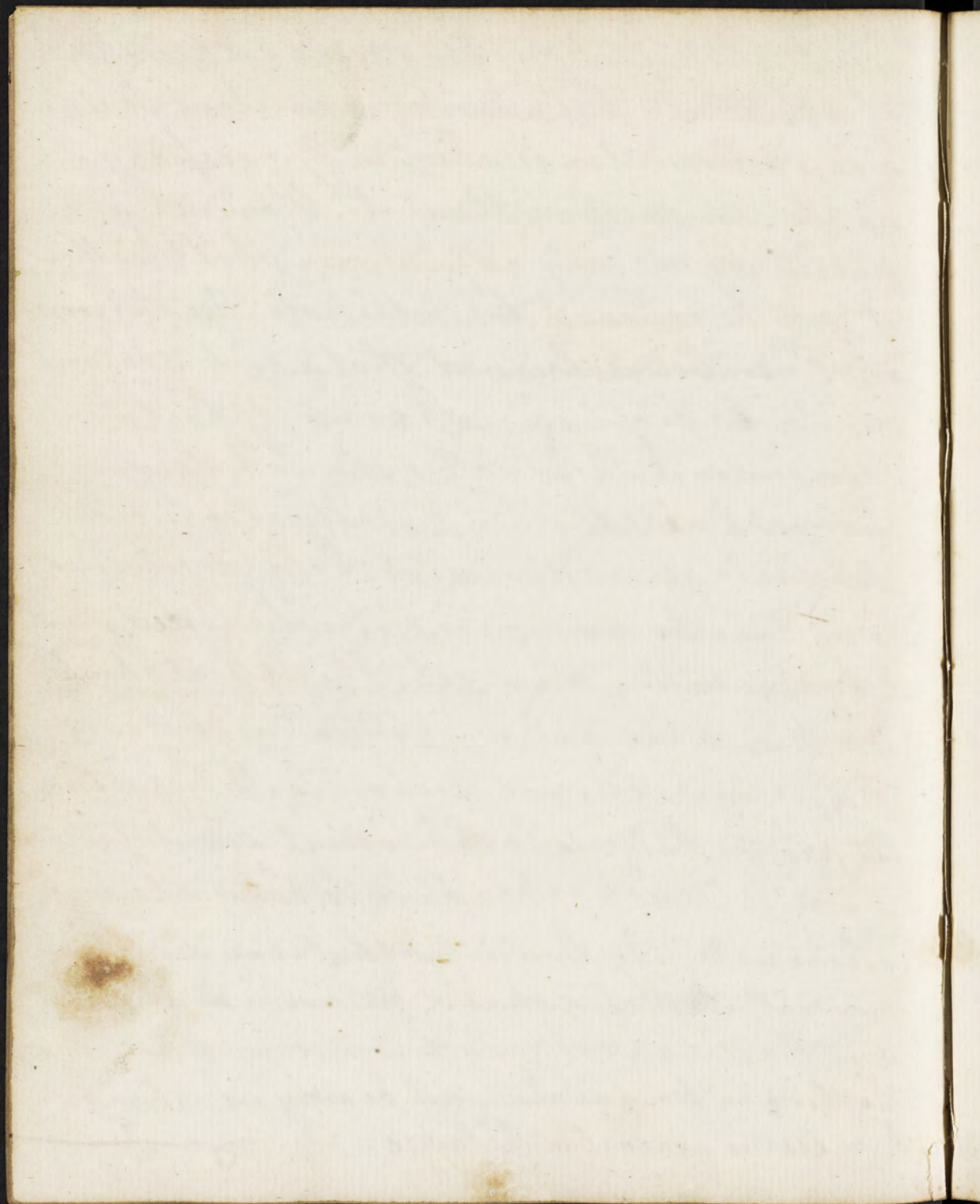


19 Fothergill recommends a Gargle of Barley Water  
with the addition of Honey & Tinct: Myrrh:  
which were directed to be injected into the  
Throat by Syringes. Dr. Pringle speaking of  
the Use of Gargles tells us that he lays the  
chief Stress upon them & he orders five or  
Six Syringes full to be injected into the Throat  
as far as the Patient can bear it & this is to be  
repeated 3 times a Day. The fumes of strong  
Vinegar & Spirits should be received into the  
Mouth & Throat & before the Patient swallows  
any Thing he should wash his Mouth & Throat  
& gargle with something of this kind. In putrid  
Fever the Patient has a desire for cold drink  
& there is no Reason to deny him this Gratifi-  
cation, Cold Draughts will check Vomiting  
refresh the Patient & act as Tonics. The Patient  
has a constant Aversion from Food we ought  
not however on this Account refrain from giving  
proper Nourishment to support & repair Strength  
We may give him Sago, Panada & whatever

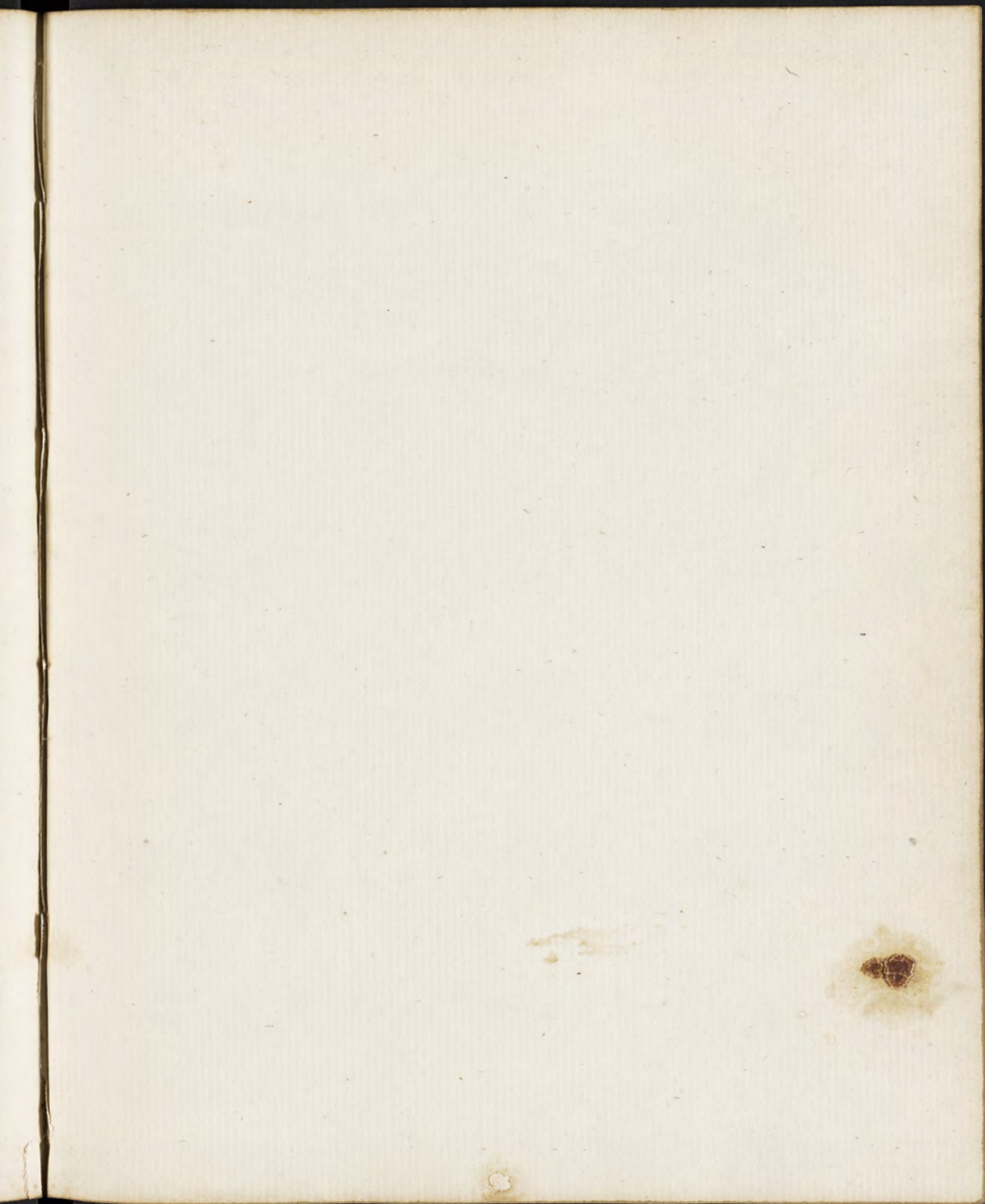


resists Putrefaction. He should eat plentifully  
of ripe Fruits but above all a constant Succes-  
sion of fresh Air is absolutely necessary &  
no one can exist without it. However a  
putrid Fever may rage during hot Weather  
it will be relieved when the Cold Weather comes  
on. Even Celsus observed that a rich Person  
should be kept in a spacious Apartment.  
The Linnen & Bed Clothes should be frequently  
changed & aired. When the Patient is recovered  
we should guard against a Relapse. This is  
to be done by giving the Vitriolici Acid Bark,  
& by regulating the Diet. The Patient should  
use Wine & such Nourishment as is of easy  
Digestion & does not dispose to Putrefaction.  
At proper Intervals the Patient should take  
a gentle Dose of Rhubarb to evacuate and  
eliminate any Colluvies that may occur—  
moderate Exercise should likewise be used &  
when the Patients Strength is pretty well restored  
Bathing in Cold Water will be very refreshing  
& preserve against a Relapse.

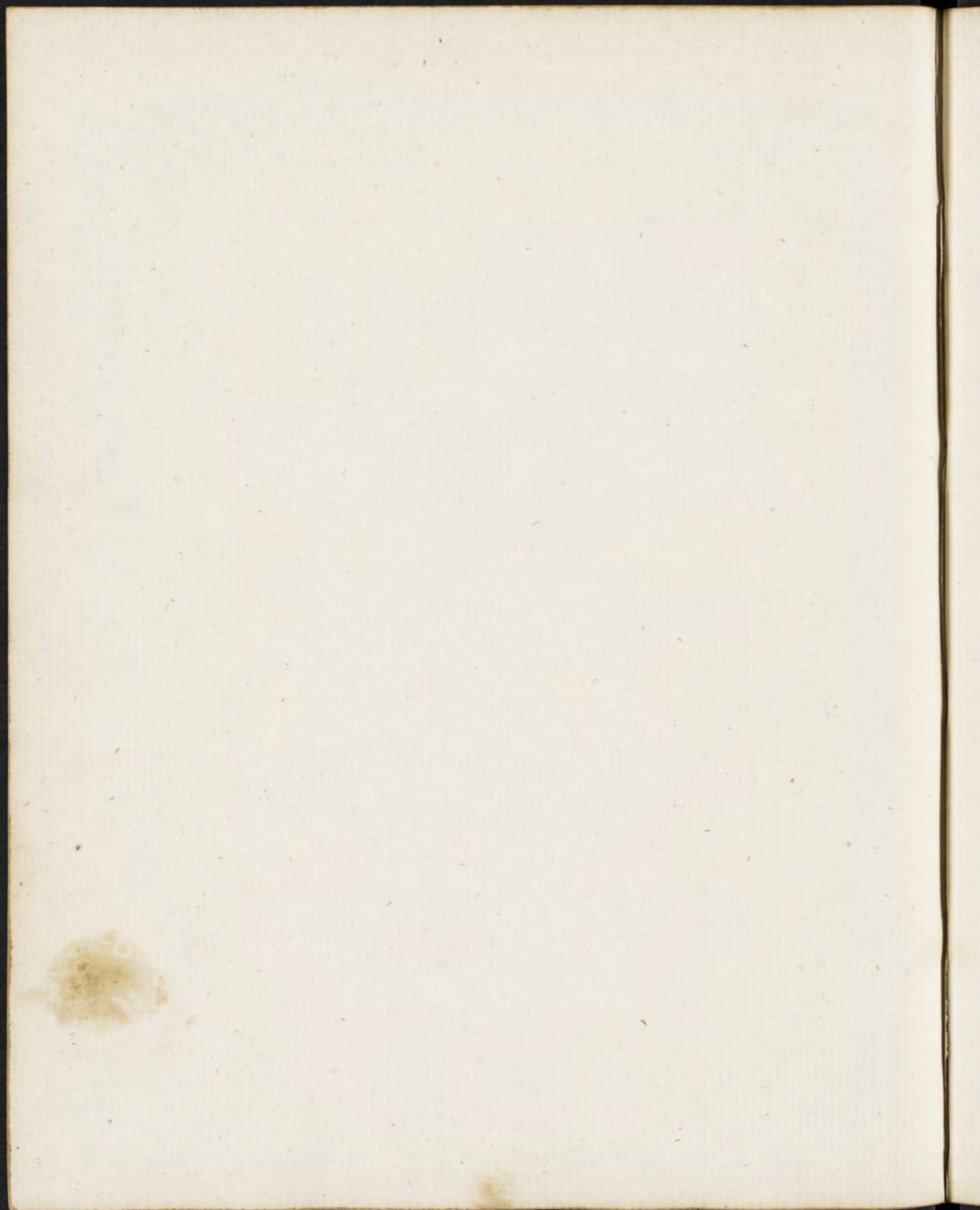




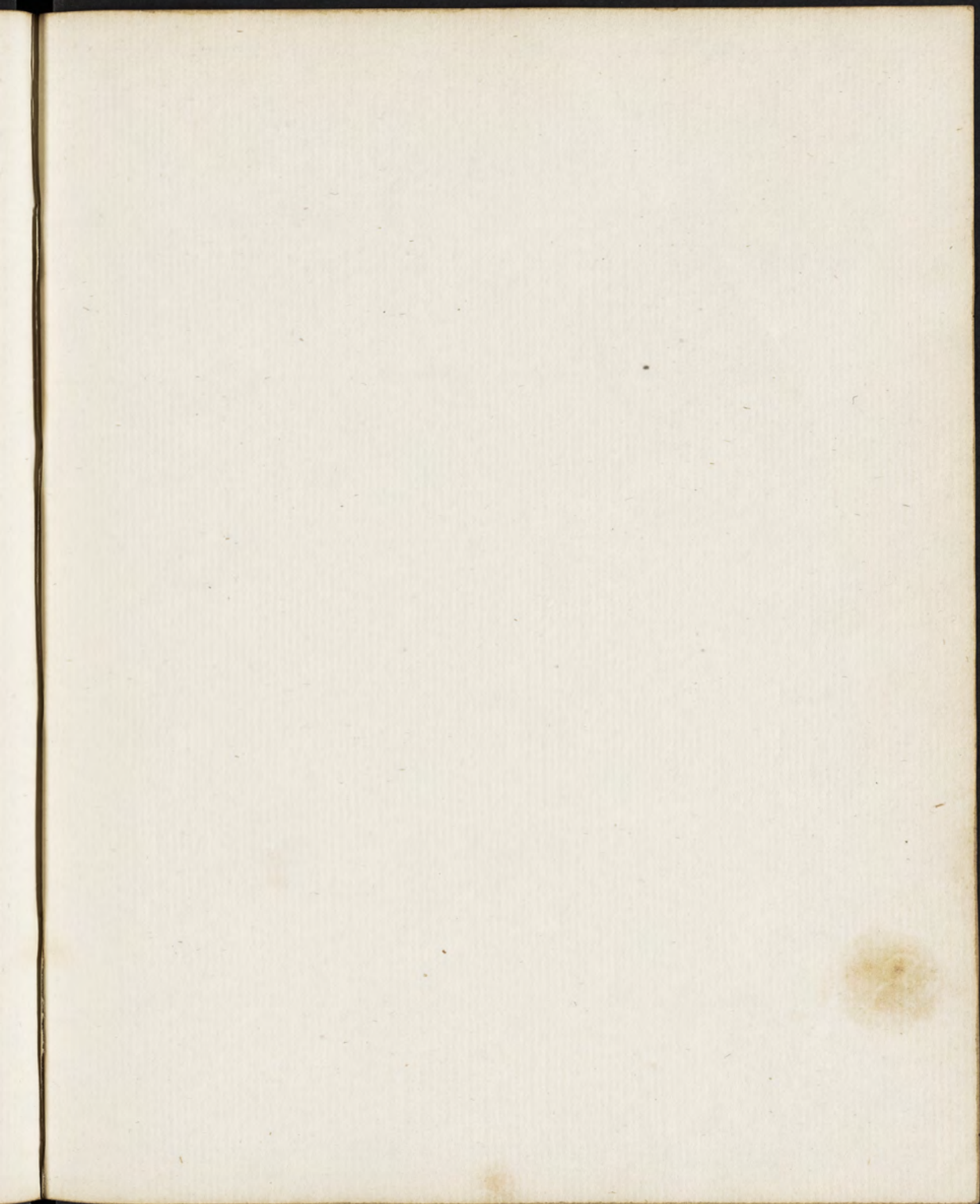




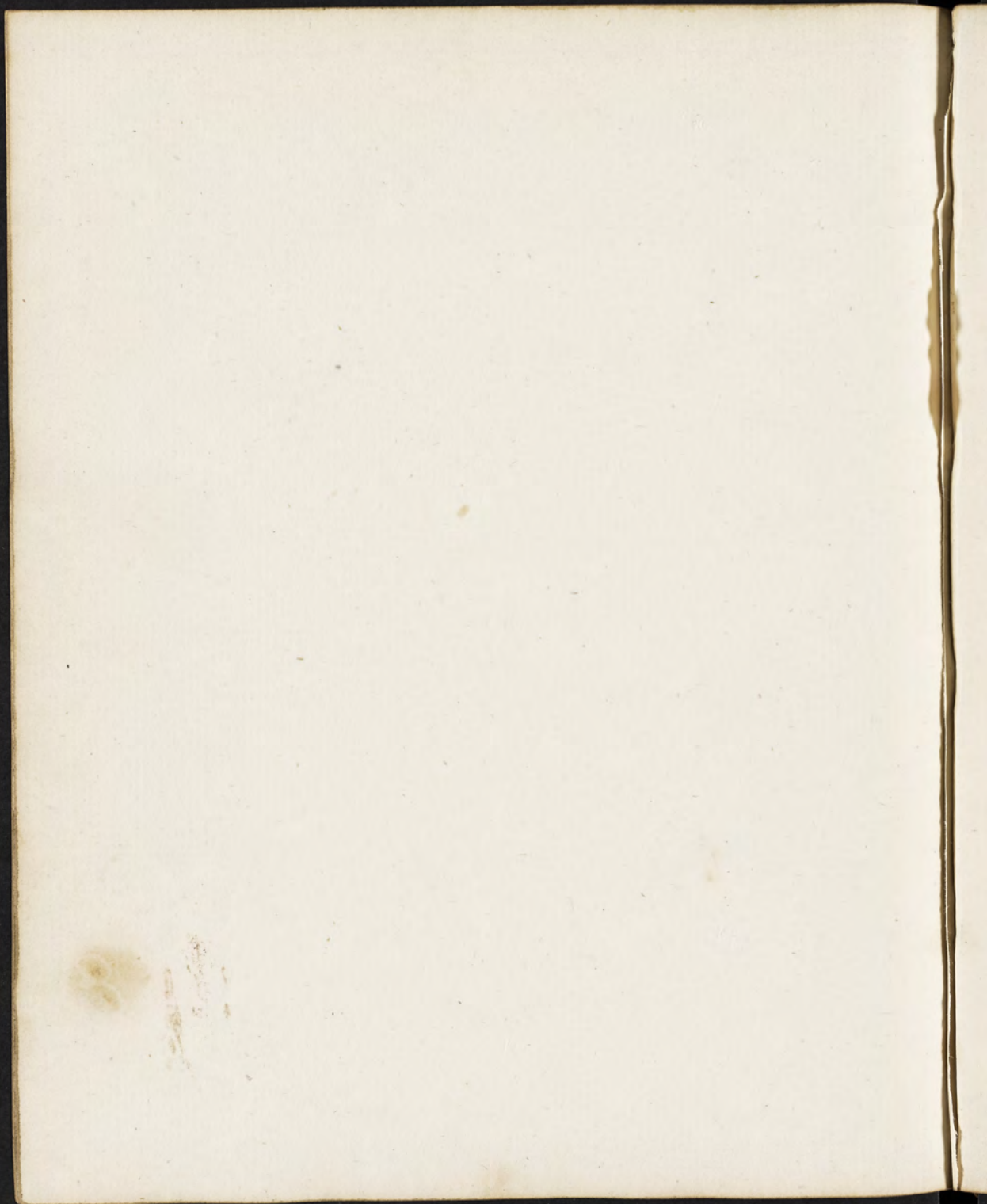




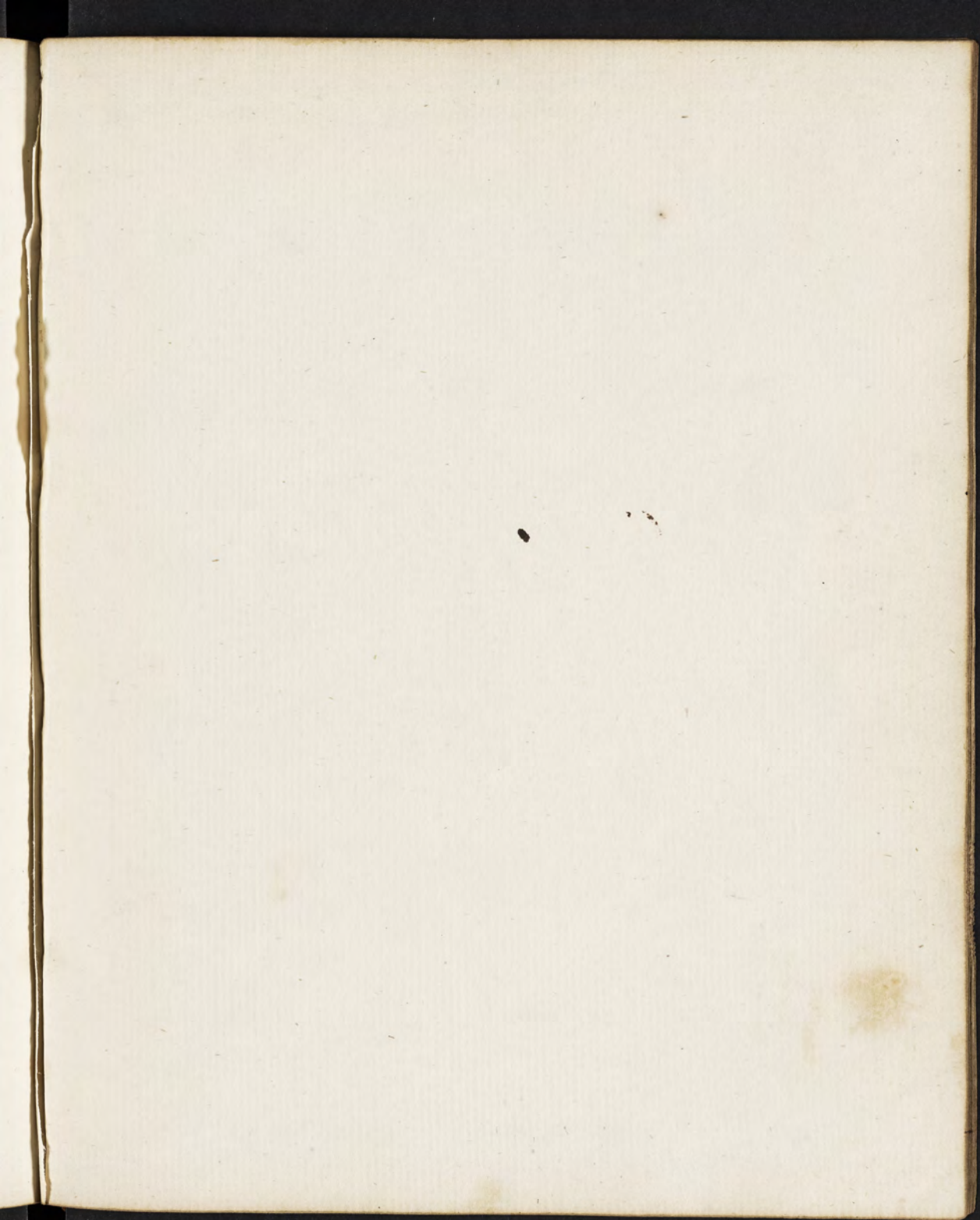




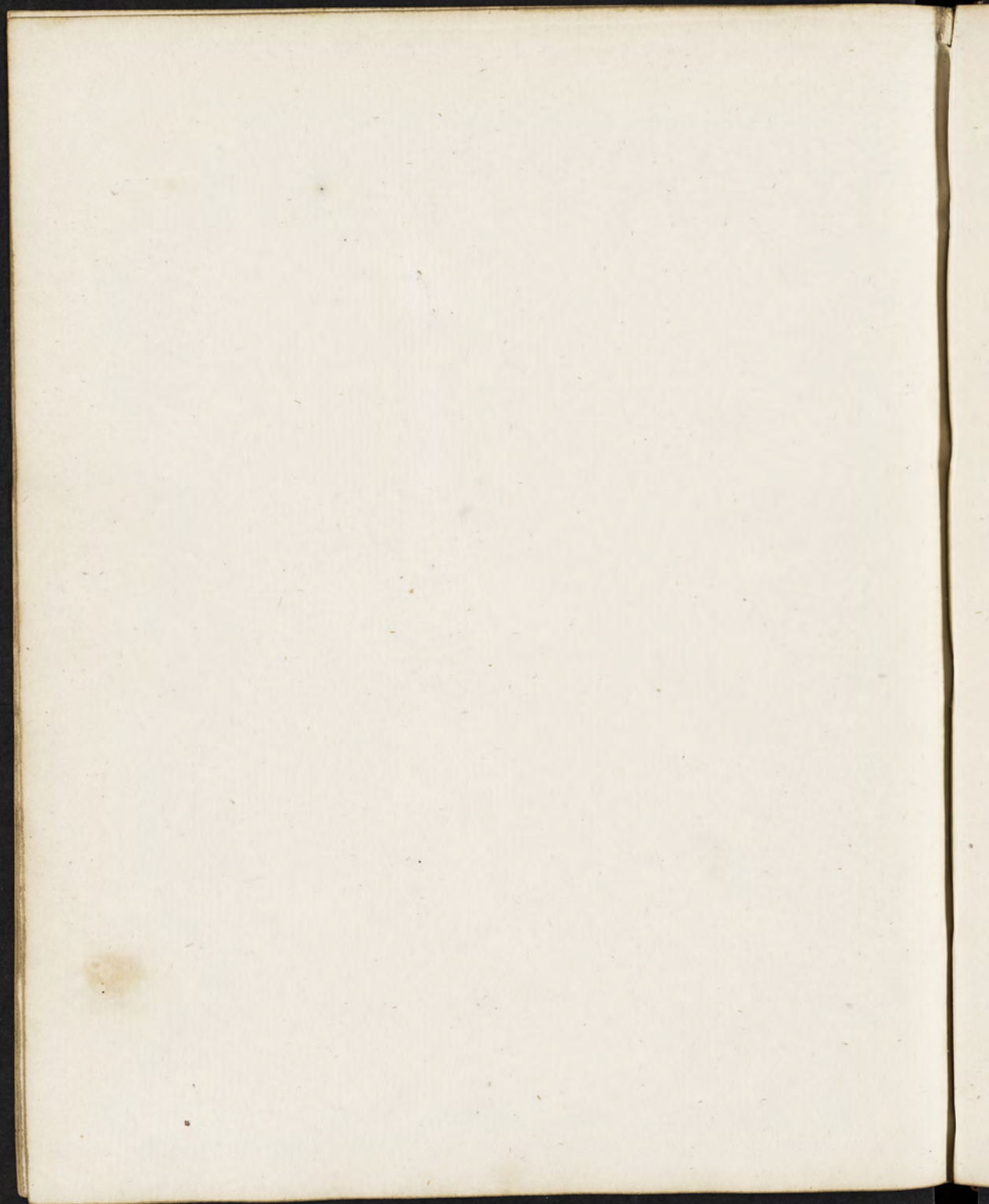




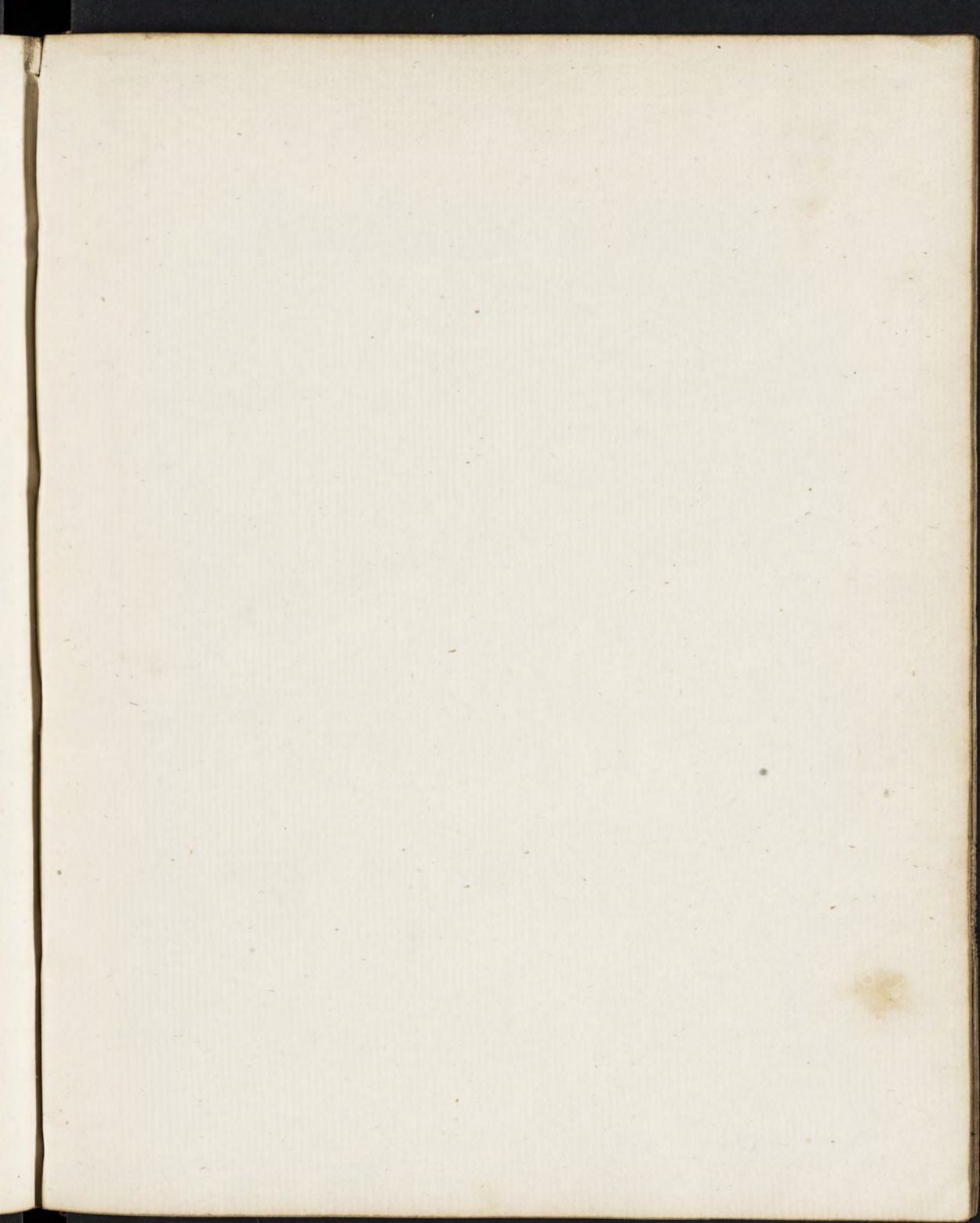




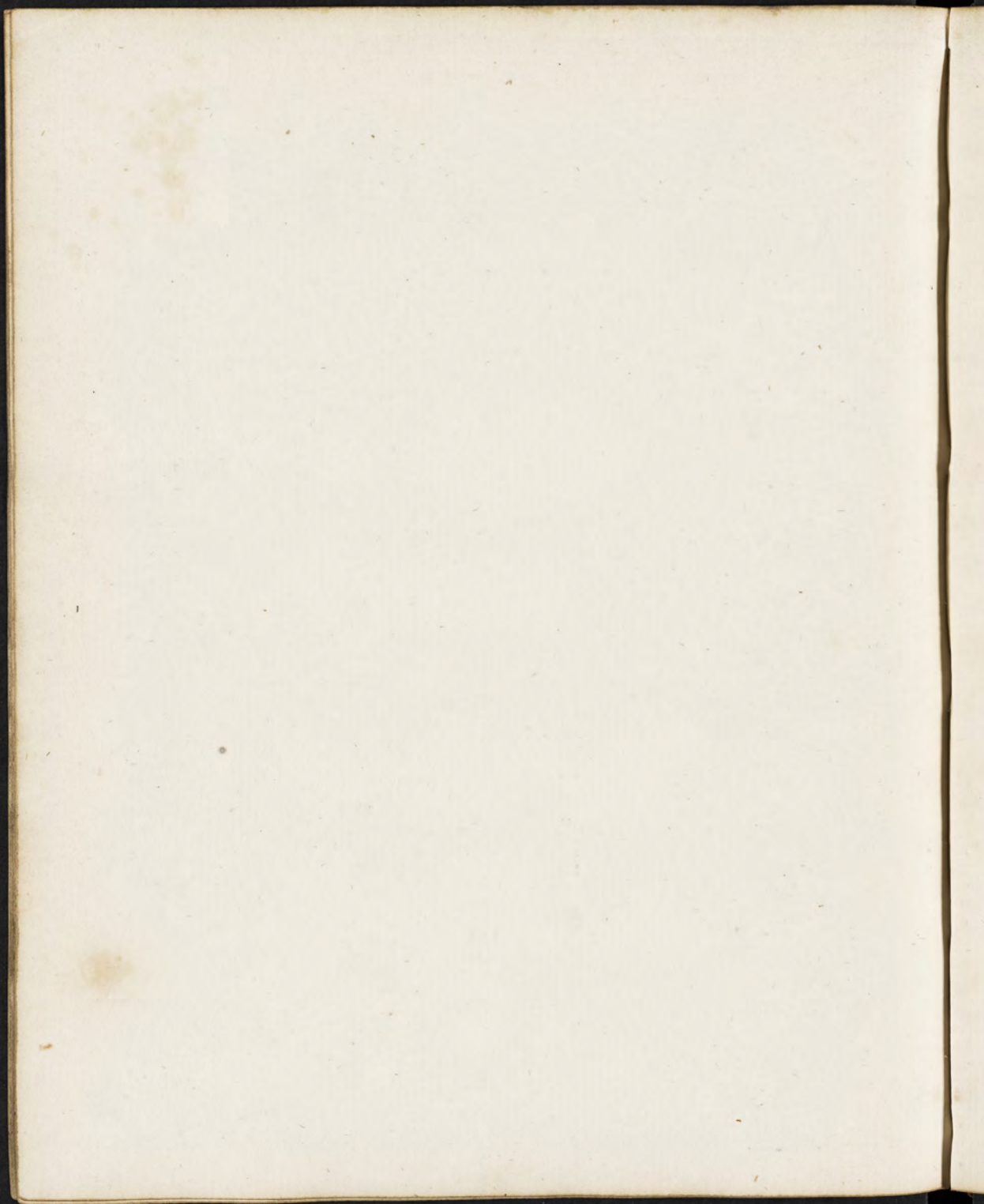




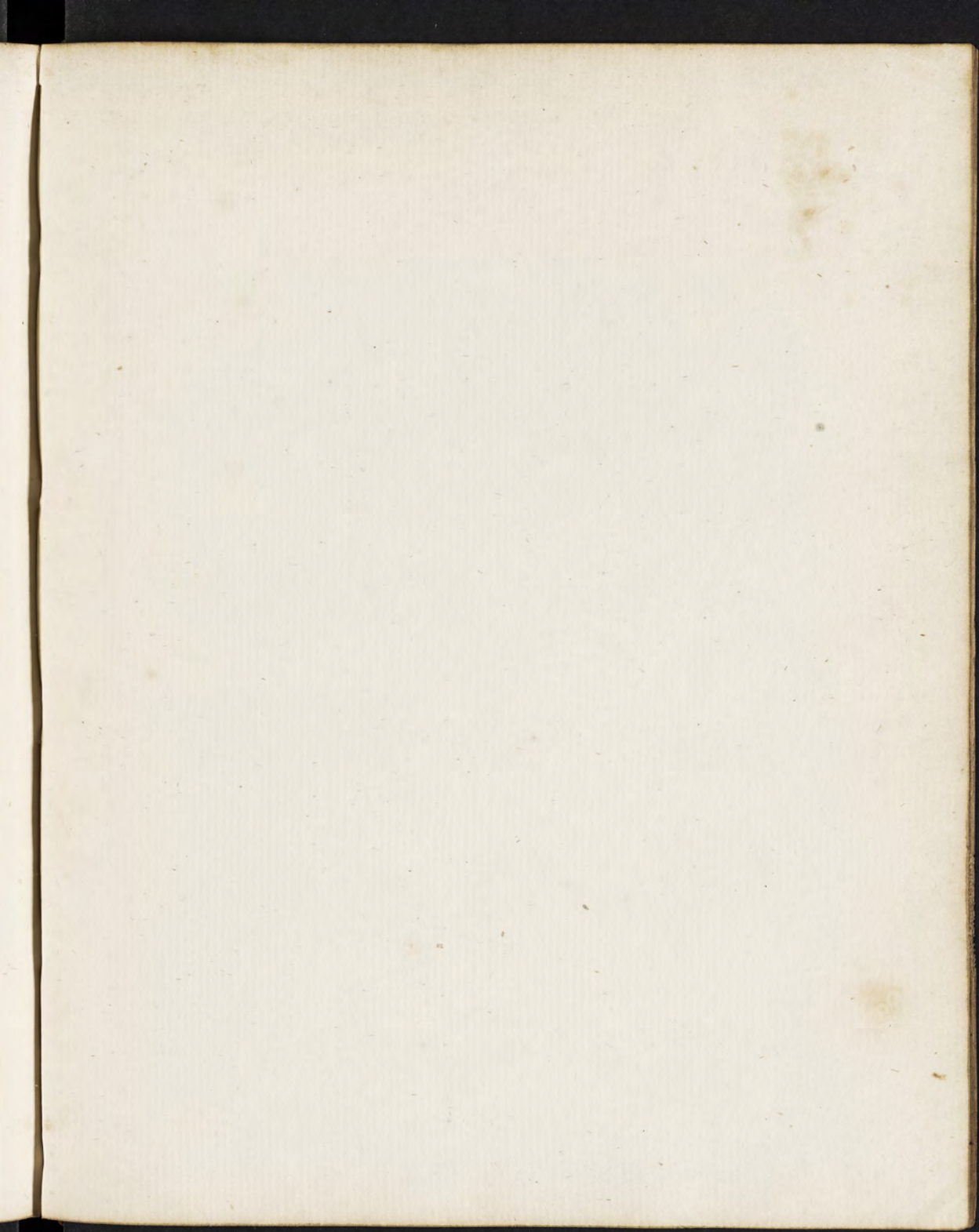




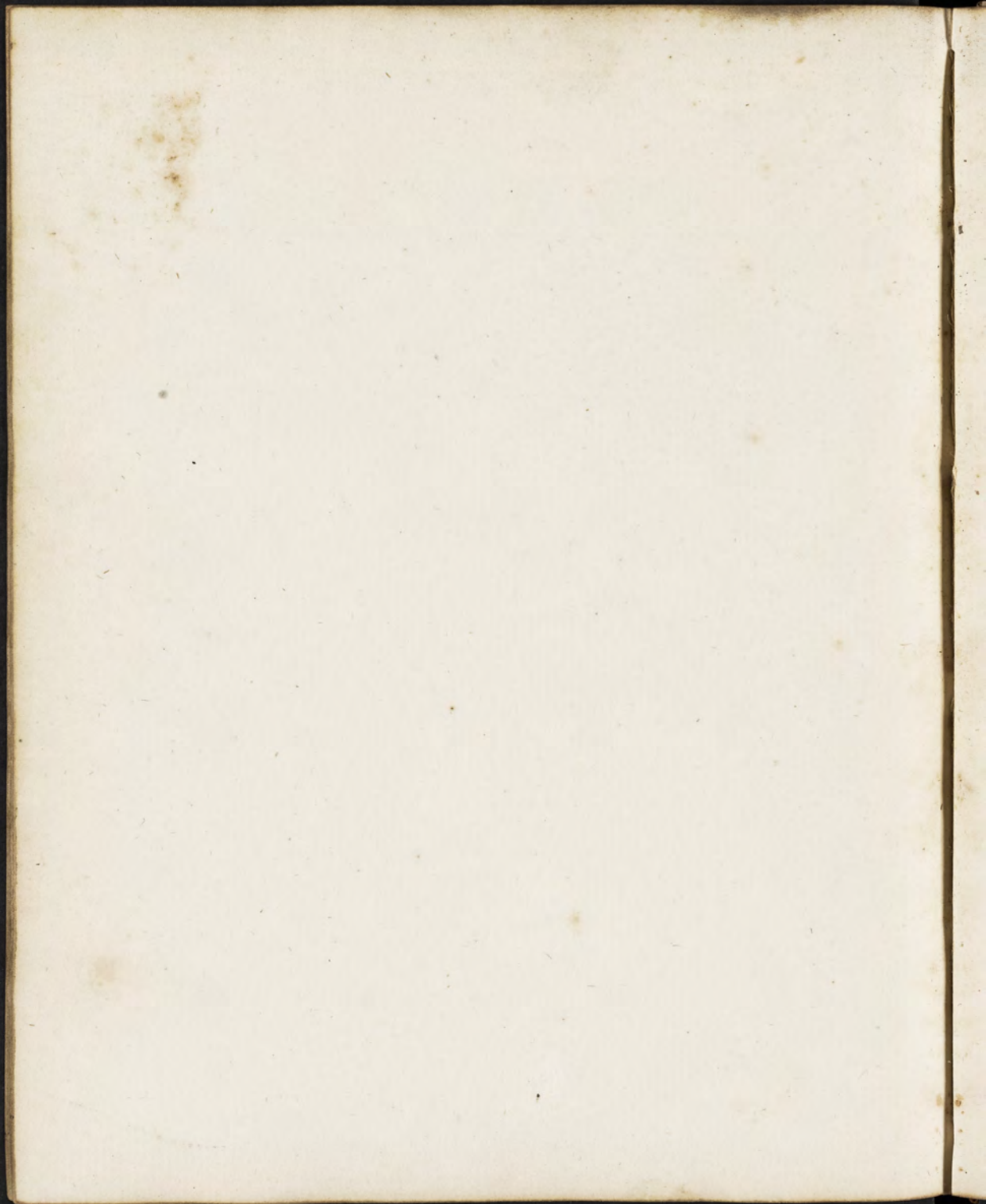




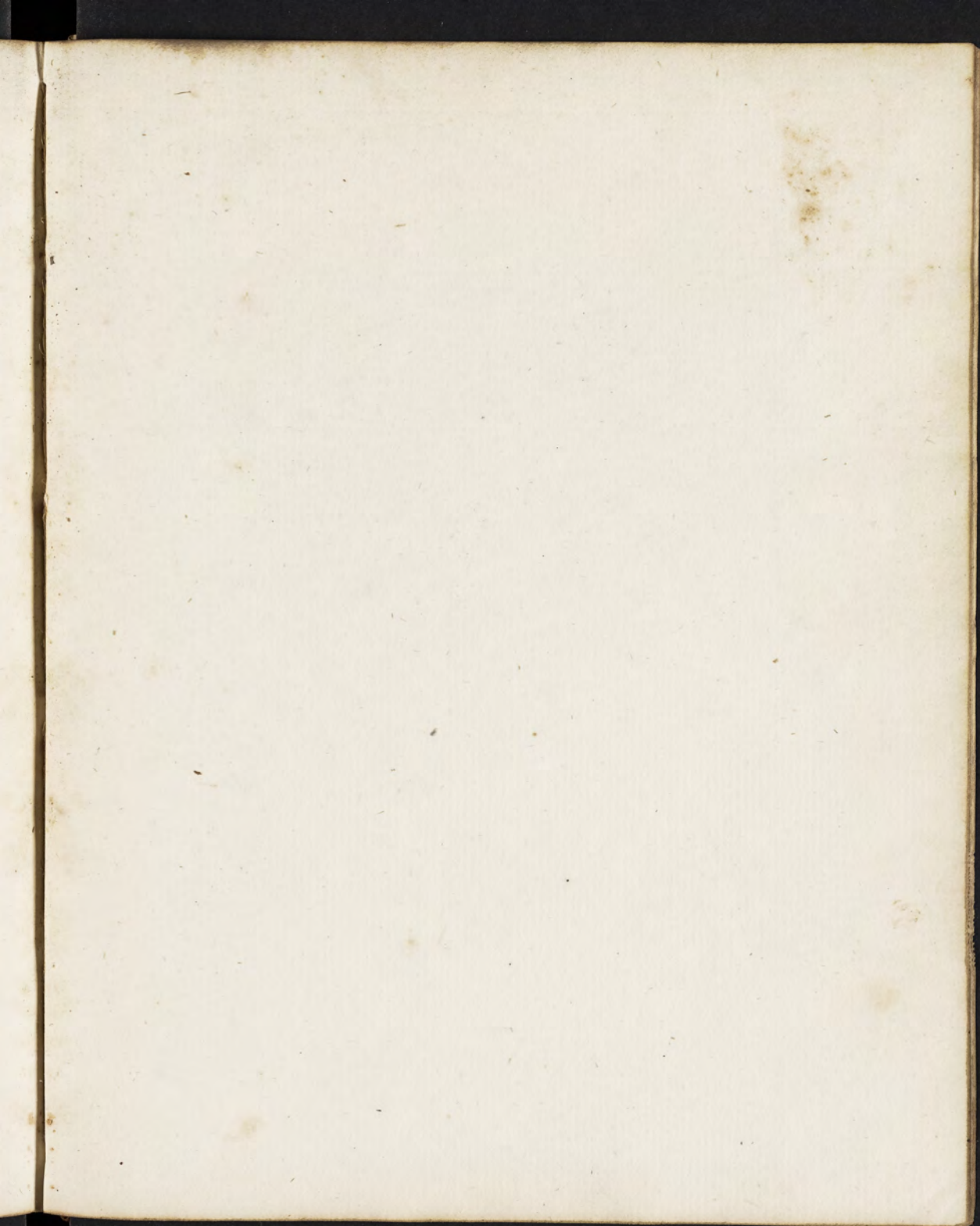




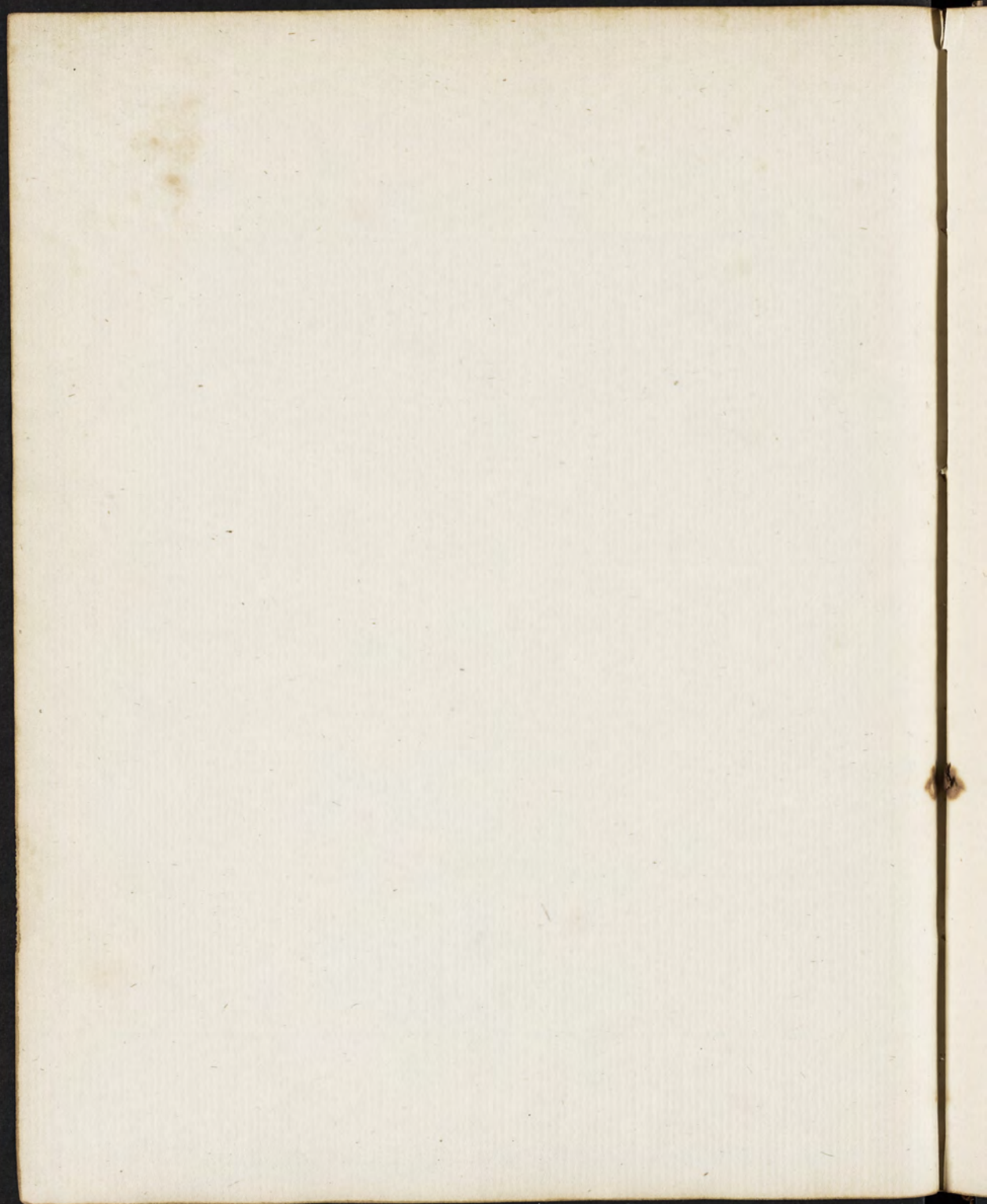




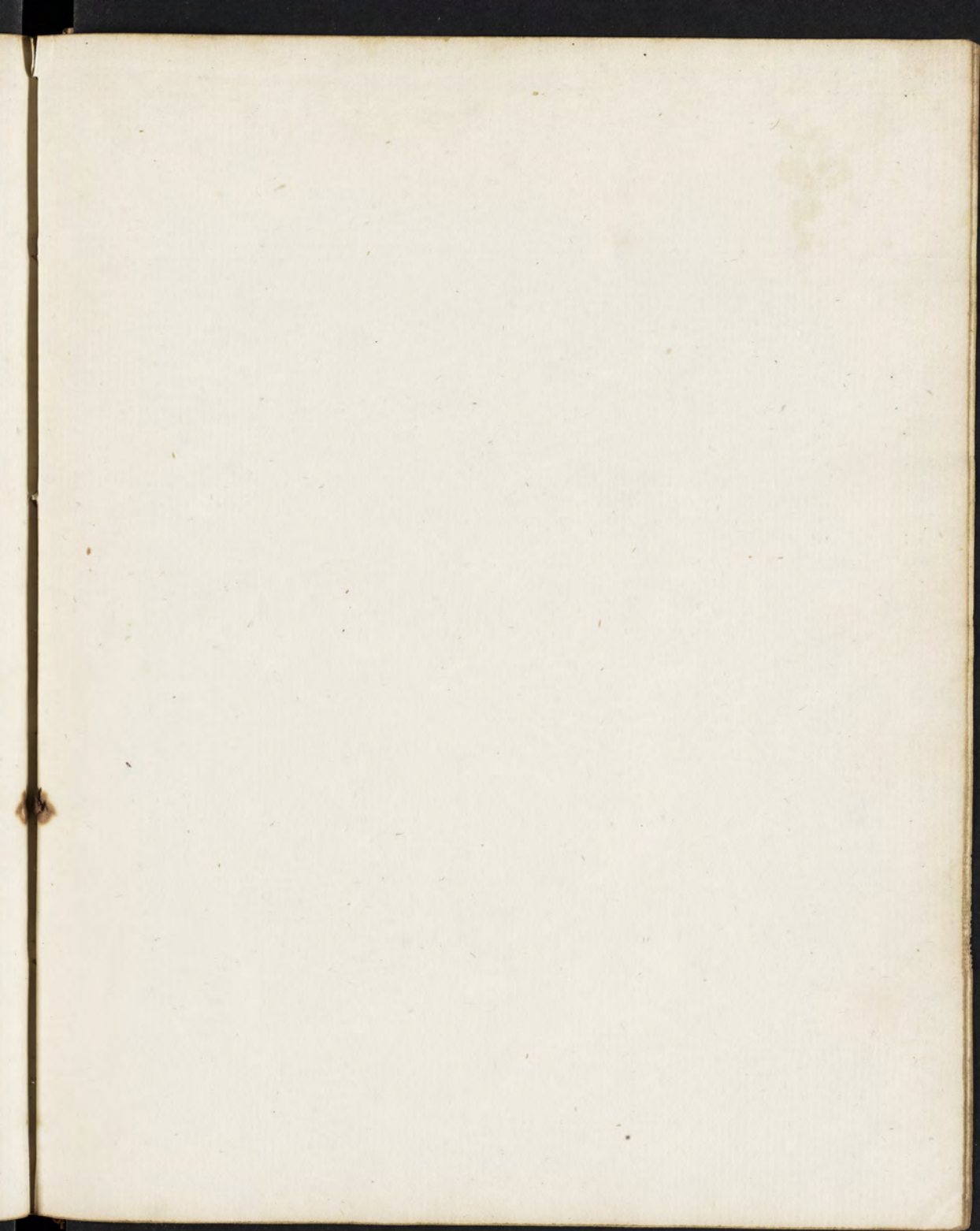




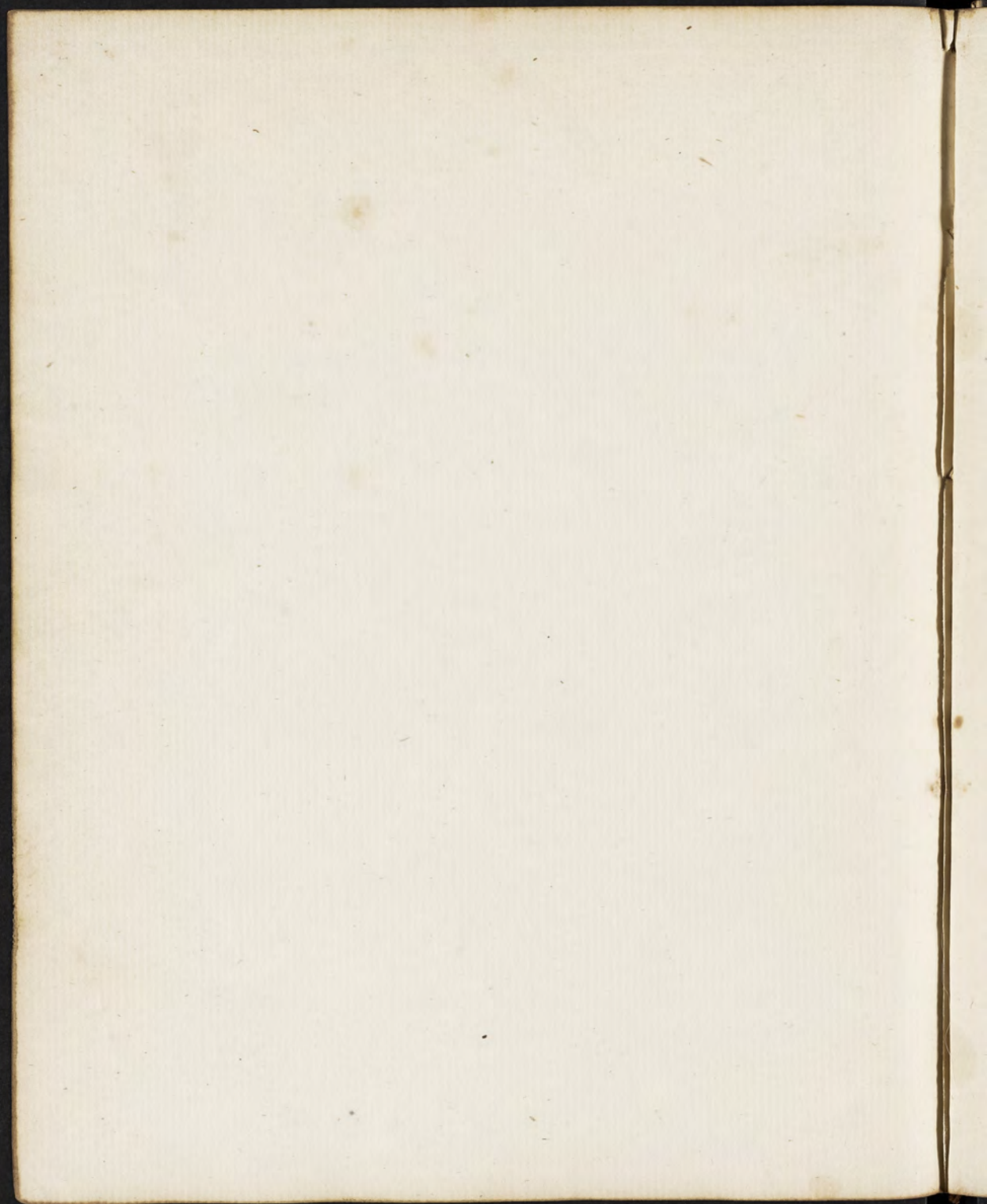




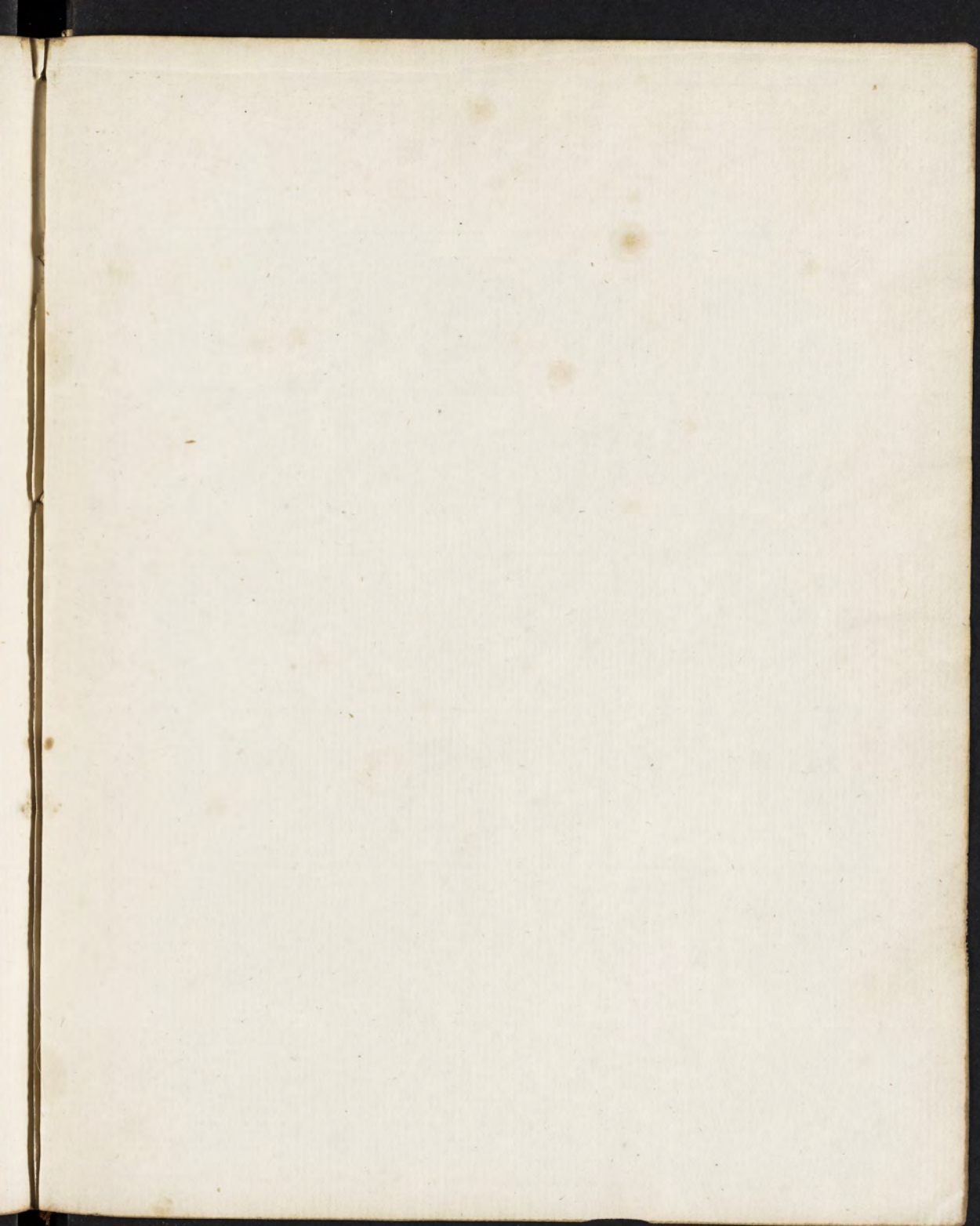




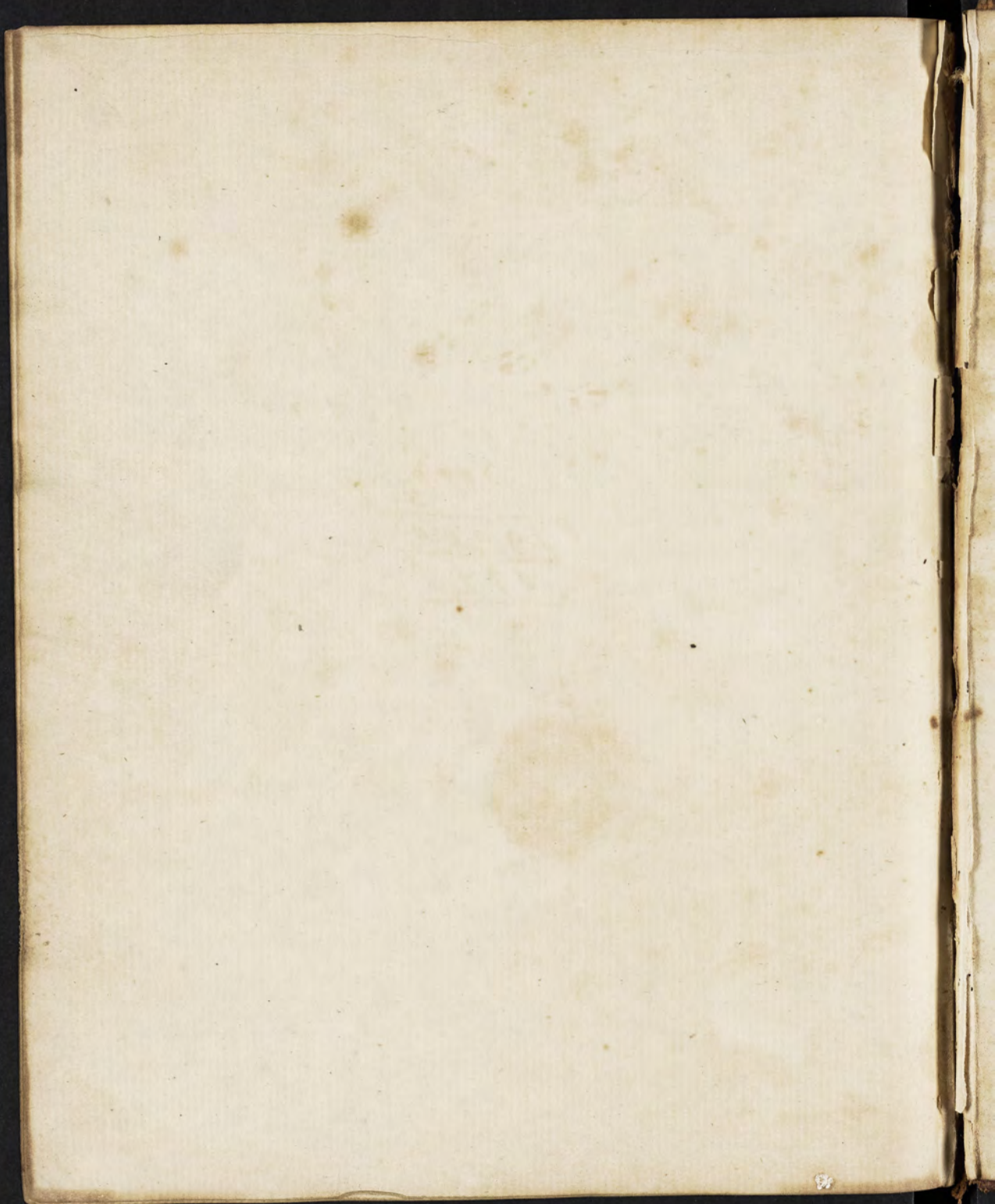














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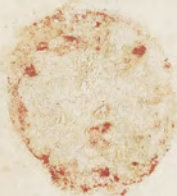


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